

22. Engine Trouble in General

A: INSPECTION

NOTE:

“RANK” shown in the chart refer to the possibility of reason for the trouble in order (“Very often” to “Rarely”)

A — Very often

B — Sometimes

C — Rarely

SYMPTOM	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
1. Engine will not start.			
1) Starter does not turn.	<ul style="list-style-type: none"> • Starter • Battery • Friction 	<ul style="list-style-type: none"> • Defective battery-to-starter harness • Defective starter switch • Defective inhibitor switch or neutral switch • Defective starter switch • Defective terminal contact • Battery drained • Defective charging system • Seizure of crankshaft and connecting rod bearing • Seized camshaft • Seized or stuck piston and cylinder 	<ul style="list-style-type: none"> B C C B A A B C C C
2) Initial combustion does not occur.	<ul style="list-style-type: none"> • Starter • Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.> • Fuel line • Belt Idler • Compression 	<ul style="list-style-type: none"> • Defective starter switch • Defective fuel pump and relay • No fuel or insufficient fuel • Defective • Defective timing • Incorrect valve clearance • Loosened spark plugs or defective gasket • Loosened cylinder head bolts or defective gasket • Improper valve seating • Faulty valve stem • Weak or broken valve springs • Worn or stuck piston rings, cylinder and piston • Incorrect valve timing • Improper engine oil (low viscosity) 	<ul style="list-style-type: none"> C A A B B C C C C C B C C B B
3) Initial combustion occurs.	<ul style="list-style-type: none"> • Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.> • Intake system • Fuel line • Belt • Compression 	<ul style="list-style-type: none"> • Defective intake manifold gasket • Defective throttle body gasket • Defective fuel pump and relay • Clogged fuel line • No fuel or insufficient fuel • Defective • Defective timing • Incorrect valve clearance • Loosened spark plugs or defective gasket • Loosened cylinder head bolts or defective gasket • Improper valve seating • Faulty valve stem • Weak or broken valve springs • Worn or stuck piston rings, cylinder and piston • Incorrect valve timing • Improper engine oil (low viscosity) 	<ul style="list-style-type: none"> A B C C B B C C C C C C C B C B B

ENGINE TROUBLE IN GENERAL

MECHANICAL

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SYMPTOM	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
5. Engine does not return to idle.	• Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	• Intake system	• Loosened or cracked vacuum hose	A
	• Others	• Stuck or damaged throttle valve • Accelerator cable out of adjustment	A B
6. Dieseling (Run-on)	• Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	• Cooling system	• Overheating	B
	• Others	• Malfunction of evaporative emission control system	B
7. After burning in exhaust system	• Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	• Intake system	• Loosened or cracked intake duct	C
		• Loosened or cracked PCV hose	C
		• Loosened or cracked vacuum hose	B
		• Defective PCV valve	B
		• Loosened oil filler cap	C
	• Belt	• Defective timing	B
	• Compression	• Incorrect valve clearance	B
		• Loosened spark plugs or defective gasket	C
		• Loosened cylinder head bolts or defective gasket	C
		• Improper valve seating	B
		• Faulty valve stem	C
		• Weak or broken valve springs	C
		• Worn or stuck piston rings, cylinder and piston	C
		• Incorrect valve timing	A
	• Lubrication system	• Incorrect oil pressure	C
	• Cooling system	• Over cooling	C
	• Others	• Malfunction of evaporative emission control system	C
8. Knocking	• Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	• Intake system	• Loosened oil filler cap	B
	• Belt	• Defective timing	B
	• Compression	• Incorrect valve clearance	C
		• Incorrect valve timing	B
	• Cooling system	• Overheating	A
9. Excessive engine oil consumption	• Intake system	• Loosened or cracked PCV hose	A
		• Defective PCV valve	B
		• Loosened oil filler cap	C
	• Compression	• Faulty valve stem	A
		• Worn or stuck piston rings, cylinder and piston	A
	• Lubrication system	• Loosened oil pump attaching bolts and defective gasket	B
		• Defective oil filter seal	B
		• Defective crankshaft oil seal	B
		• Defective rocker cover gasket	B
		• Loosened oil drain plug or defective gasket	B
		• Loosened oil pan fitting bolts or defective oil pan	B

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SYMPTOM	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
10. Excessive fuel consumption	• Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	• Intake system	• Dirty air cleaner element	A
	• Belt	• Defective timing	B
	• Compression	• Incorrect valve clearance	B
		• Loosened spark plugs or defective gasket	C
		• Loosened cylinder head bolts or defective gasket	C
		• Improper valve seating	B
		• Faulty valve stem	C
	• Lubrication system	• Weak or broken valve springs	C
		• Worn or stuck piston rings, cylinder and piston	B
	• Cooling system	• Incorrect valve timing	B
		• Incorrect oil pressure	C
		• Over cooling	C
	• Others	• Accelerator cable out of adjustment	B