

# ENGINE TROUBLE IN GENERAL

MECHANICAL

## 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

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
1. Engine will not start.			
1) Starter does not turn.	Starter	• Defective battery-to-starter harness	B
		• Defective starter switch	C
		• Defective inhibitor switch or neutral switch	C
		• Defective starter	B
	Battery	• Poor terminal connection	A
		• Run-down battery	A
		• Defective charging system	B
	Excessive friction	• Seizure of crankshaft and connecting rod bearing	C
		• Seized camshaft	C
• Seized or stuck piston and cylinder		C	
2) Initial combustion does not occur.	Starter	• Defective starter	C
	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Fuel line	• Defective fuel pump and relay	A
		• Lack of or insufficient fuel	B
	Timing belt	• Defective (deterioration, etc.)	B
		• Defective timing	B
	Compression	• Incorrect valve clearance	C
		• Loosened spark plugs or defective gasket	C
		• Loosened cylinder head bolts or defective gasket	C
		• Improper valve seating	C
		• Defective valve stem	C
		• Worn or broken valve spring	B
		• Worn or stuck piston rings, cylinder and piston	C
		• Incorrect valve timing	B
• Improper engine oil (low viscosity)	B		
3) Initial combustion occurs.	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Intake system	• Defective intake manifold gasket	B
		• Defective throttle body gasket	B
	Fuel line	• Defective fuel pump and relay	C
		• Clogged fuel line	C
		• Lack of or insufficient fuel	B
	Timing belt	• Defective (deterioration, etc.)	B
		• Defective timing	B
	Compression	• Incorrect valve clearance	C
		• Loosened spark plugs or defective gasket	C
		• Loosened cylinder head bolts or defective gasket	C
		• Improper valve seating	C
		• Defective valve stem	C
		• Worn or broken valve spring	B
• Worn or stuck piston rings, cylinder and piston		C	
• Incorrect valve timing		B	
• Improper engine oil (low viscosity)	B		

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TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
4) Engine stalls after initial combustion.	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Intake system	• Loosened or cracked intake duct	B
		• Loosened or cracked PCV hose	C
		• Loosened or cracked vacuum hose	C
		• Defective intake manifold gasket	B
		• Defective throttle body gasket	B
		• Dirty air cleaner element	C
	Fuel line	• Clogged fuel line	C
		• Lack of or insufficient fuel	B
	Timing belt	• Defective (deterioration, etc.)	B
		• Defective timing	B
	Compression	• Incorrect valve clearance	C
		• Loosened spark plugs or defective gasket	C
		• Loosened cylinder head bolts or defective gasket	C
		• Improper valve seating	C
• Defective valve stem		C	
• Worn or broken valve spring		B	
• Worn or stuck piston rings, cylinder and piston		C	
• Incorrect valve timing		B	
• Improper engine oil (low viscosity)	B		
2. Rough idle and engine stall	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Intake system	• Loosened or cracked intake duct	A
		• Loosened or cracked PCV hose	A
		• Loosened or cracked vacuum hose	A
		• Defective intake manifold gasket	B
		• Defective throttle body gasket	B
		• Defective PCV valve	C
		• Loosened oil filler cap	B
		• Dirty air cleaner element	C
	Fuel line	• Defective fuel pump and relay	C
		• Clogged fuel line	C
		• Lack of or insufficient fuel	B
	Timing belt	• Defective timing	C
	Compression	• Incorrect valve clearance	B
		• Loosened spark plugs or defective gasket	B
		• Loosened cylinder head bolts or defective gasket	B
		• Improper valve seating	B
		• Defective valve stem	C
		• Worn or broken valve spring	B
		• Worn or stuck piston rings, cylinder and piston	B
		• Incorrect valve timing	A
	• Improper engine oil (low viscosity)	B	
	Lubrication system	• Incorrect oil pressure	B
		• Defective rocker cover gasket	C
	Cooling system	• Overheating	C
	Others	• Malfunction of evaporative emission control system	A
		• Stuck or damaged throttle valve	B
		• Accelerator cable out of adjustment	C

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TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
3. Low output, hesitation and poor acceleration	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Intake system	• Loosened or cracked intake duct	A
		• Loosened or cracked PCV hose	A
		• Loosened or cracked vacuum hose	B
		• Defective intake manifold gasket	B
		• Defective throttle body gasket	B
		• Defective PCV valve	B
		• Loosened oil filler cap	B
		• Dirty air cleaner element	A
	Fuel line	• Defective fuel pump and relay	B
		• Clogged fuel line	B
		• Lack of or insufficient fuel	C
	Timing belt	• Defective timing	B
	Compression	• Incorrect valve clearance	B
		• Loosened spark plugs or defective gasket	B
		• Loosened cylinder head bolts or defective gasket	B
		• Improper valve seating	B
		• Defective valve stem	C
		• Worn or broken valve spring	B
		• Worn or stuck piston rings, cylinder and piston	C
		• Incorrect valve timing	A
• Improper engine oil (low viscosity)	B		
Lubrication system	• Incorrect oil pressure	B	
Cooling system	• Overheating	C	
	• Over cooling	C	
Others	• Malfunction of evaporative emission control system	A	
4. Surging	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Intake system	• Loosened or cracked intake duct	A
		• Loosened or cracked PCV hose	A
		• Loosened or cracked vacuum hose	A
		• Defective intake manifold gasket	B
		• Defective throttle body gasket	B
		• Defective PCV valve	B
		• Loosened oil filler cap	B
		• Dirty air cleaner element	B
	Fuel line	• Defective fuel pump and relay	B
		• Clogged fuel line	B
		• Lack of or insufficient fuel	C
	Timing 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	C
		• Defective valve stem	C
		• Worn or broken valve spring	C
		• Worn or stuck piston rings, cylinder and piston	C
		• Incorrect valve timing	A
• Improper engine oil (low viscosity)	B		
Cooling system	• Overheating	B	
Others	• Malfunction of evaporative emission control system	C	

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TROUBLE	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	A
		• Accelerator cable out of adjustment	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
	Timing 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
		• Defective valve stem	C
		• Worn or broken valve spring	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
	Timing 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	• Defective 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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10. Excessive fuel consumption	Engine control system <Ref. to EN(H4SO)-2, Basic Diagnostic Procedure.>		A
	Intake system	• Dirty air cleaner element	A
	Timing 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
		• Defective valve stem	C
		• Worn or broken valve spring	C
		• Worn or stuck piston rings, cylinder and piston	B
		• Incorrect valve timing	B
	Lubrication system	• Incorrect oil pressure	C
	Cooling system	• Over cooling	C
Others	• Accelerator cable out of adjustment	B	