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
Engine will not start.		·	•
1) Starter does not turn.	Starter	Defective battery-to-starter harness	В
,		Defective starter switch	С
		Defective inhibitor switch or neutral switch	С
		Defective starter	В
	Battery	Poor terminal connection	А
		Run-down battery	А
		Defective charging system	В
	Friction	Seizure of crankshaft and connecting rod bearing	С
		Seized camshaft	С
		Seized or stuck piston and cylinder	С
2) Initial combustion does	Starter	Defective starter	С
not occur.	• Engine control system <ref.< td=""><td colspan="2">Engine control system <ref. basic="" diagnostic="" en(h4so)-2,="" procedure.="" to=""></ref.></td></ref.<>	Engine control system <ref. basic="" diagnostic="" en(h4so)-2,="" procedure.="" to=""></ref.>	
	• Fuel line	Defective fuel pump and relay	Α
		Lack of or insufficient fuel	В
	• Belt	Defective	В
		Defective timing	В
	Compression	Incorrect valve clearance	С
		Loosened spark plugs or defective gasket	С
		Loosened cylinder head bolts or defective gasket	С
		Improper valve seating	С
		Defective valve stem	С
		Worn or broken valve spring	В
		Worn or stuck piston rings, cylinder and piston	С
		Incorrect valve timing	В
		Improper engine oil (low viscosity)	В
3) Initial combustion occur.	• Engine control system <ref. basic="" diagnostic="" en(h4so)-2,="" procedure.="" to=""></ref.>		Α
,	Intake system	Defective intake manifold gasket	В
		Defective throttle body gasket	В
	• Fuel line	Defective fuel pump and relay	С
		Clogged fuel line	С
		Lack of or insufficient fuel	В
	• Belt	Defective	В
		Defective timing	В
	Compression	Incorrect valve clearance	С
		Loosened spark plugs or defective gasket	С
		Loosened cylinder head bolts or defective gasket	С
		Improper valve seating	С
		Defective valve stem	С
		Worn or broken valve spring	В
		Worn or stuck piston rings, cylinder and piston	С
		Incorrect valve timing	В
		Improper engine oil (low viscosity)	В

ENGINE TROUBLE IN GENERAL

MECHANICAL

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
4) Engine stalls after initial	• Engine control system <ref.< td=""><td>to EN(H4SO)-2, Basic Diagnostic Procedure.></td><td>Α</td></ref.<>	to EN(H4SO)-2, Basic Diagnostic Procedure.>	Α
combustion.	Intake system	Loosened or cracked intake duct	В
		Loosened or cracked PCV hose	С
		Loosened or cracked vacuum hose	С
		Defective intake manifold gasket	В
		Defective throttle body gasket	В
		Dirty air cleaner element	С
	• Fuel line	Clogged fuel line	С
		Lack of or insufficient fuel	В
	• Belt	Defective	В
		Defective timing	В
	Compression	Incorrect valve clearance	С
		Loosened spark plugs or defective gasket	С
		Loosened cylinder head bolts or defective gasket	С
		Improper valve seating	С
		Defective valve stem	С
		Worn or broken valve spring	В
		Worn or stuck piston rings, cylinder and piston	С
		Incorrect valve timing	В
		Improper engine oil (low viscosity)	В
2. Rough idle and engine	• Engine control system <ref.< td=""><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td><td>Α</td></ref.<>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Α
stall	Intake system	Loosened or cracked intake duct	Α
		Loosened or cracked PCV hose	Α
		Loosened or cracked vacuum hose	Α
		Defective intake manifold gasket	В
			В
		Defective PCV valve	С
		Loosened oil filler cap	В
		·	С
	• Fuel line	-	С
			С
		Defective throttle body gasket Dirty air cleaner element Clogged fuel line Lack of 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 Defective valve stern Worn or broken valve spring Improper engine oil (low viscosity) Incorrect valve dintake duct Loosened or cracked pcV hose Loosened or cracked vacuum hose Defective intake manifold gasket Defective PcV valve Loosened oil filler cap Dirty air cleaner element Defective fuel pump and relay Clogged fuel line Lack of or insufficient fuel Defective timing Incorrect valve clearance Loosened cylinder head bolts or defective gasket Loosened spark plugs or defective gasket Improper valve seating Defective valve stern Worn or broken valve spring Worn or stuck piston rings, cylinder and piston Incorrect valve clearance Loosened spark plugs or defective gasket Unosened valve stern Worn or broken valve spring Worn or stuck piston rings, cylinder and piston Incorrect valve timing Improper engine oil (low viscosity) Incorrect valve timing Improper engine oil (low viscosity) Incorrect valve timing Incorrect valve cover gasket Defective rocker cover gasket	В
	• Belt	Defective timing	С
	Compression	-	В
	'		В
			В
		<u> </u>	В
			С
			В
		1 0	В
			A
			В
	Lubrication system		В
		·	С
	Cooling system		C
	Others	-	A
	- Suieis	· · · · · · · · · · · · · · · · · · ·	В
			С

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
3. Low output, hesitation and	· ·	D EN(H4SO)-2, Basic Diagnostic Procedure.>	Α
poor acceleration	Intake system	Loosened or cracked intake duct	Α
		Loosened or cracked PCV hose	Α
		Loosened or cracked vacuum hose	В
		Defective intake manifold gasket	В
		Defective throttle body gasket	В
		Defective PCV valve	В
		Loosened oil filler cap	В
		Dirty air cleaner element	A
	• Fuel line	Defective fuel pump and relay	В
		Clogged fuel line	В
		Lack of or insufficient fuel	C
	• Belt	Defective timing	В
	Compression	Incorrect valve clearance	В
	Compression	Loosened spark plugs or defective gasket	В
		Loosened cylinder head bolts or defective gasket	В
		Improper valve seating	В
		Defective valve stem	С
		Worn or broken valve spring	В
		Worn or stuck piston rings, cylinder and piston	С
		Incorrect valve timing	A
		<u> </u>	
	a Lubrication quatern	Improper engine oil (low viscosity)	В
	Lubrication system	Incorrect oil pressure	В
	Cooling system	Overheating	С
	- Oth ave	Over cooling Malfunction of even profits a princip a control overtex.	C
4 Comming	Others Def to	Malfunction of evaporative emission control system TAN(LACC) 3. Regio Pierrestic Breadure.	A
4. Surging		D 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	В
		Defective throttle body gasket	В
		Defective PCV valve	В
		Loosened oil filler cap	В
		Dirty air cleaner element	В
	• Fuel line	Defective fuel pump and relay	В
		Clogged fuel line	В
		Lack of or insufficient fuel	С
	• Belt	Defective timing	В
	Compression	Incorrect valve clearance	В
		Loosened spark plugs or defective gasket	С
		Loosened cylinder head bolts or defective gasket	С
		Improper valve seating	С
		Defective valve stem	С
		Worn or broken valve spring	С
		Worn or stuck piston rings, cylinder and piston	С
		Incorrect valve timing	Α
		Improper engine oil (low viscosity)	В
	Cooling system	Overheating	В
	Others	Malfunction of evaporative emission control system	С

ENGINE TROUBLE IN GENERAL

MECHANICAL

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

ENGINE TROUBLE IN GENERAL

MECHANICAL

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
10. Excessive fuel consump-	• Engine control system <ref. basic="" diagnostic="" en(h4so)-2,="" procedure.="" to=""></ref.>		Α
tion	Intake system	Dirty air cleaner element	Α
	• Belt	Defective timing	В
	Compression	Incorrect valve clearance	В
		Loosened spark plugs or defective gasket	С
		Loosened cylinder head bolts or defective gasket	С
		Improper valve seating	В
		Defective valve stem	С
		Worn or broken valve spring	С
		Worn or stuck piston rings, cylinder and piston	В
		Incorrect valve timing	В
	Lubrication system	Incorrect oil pressure	С
	Cooling system	Over cooling	С
	Others	Accelerator cable out of adjustment	В