### **DIAGNOSTICS**

## 1. Engine Trouble in General

#### 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	В
		Defective starter switch	С
		Defective inhibitor switch or neutral switch	С
		Defective starter	В
	Battery	Poor terminal connecton	А
		Run-down battrey	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.	• Fuel injection system <ref.< td=""><td>to 2-7 [T6A0].&gt;</td><td>А</td></ref.<>	to 2-7 [T6A0].>	А
	• Fuel line	Defective fuel pump and relay	А
		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
<ol><li>Initial combustion occur.</li></ol>	• Fuel injection system <ref. 2-7="" [t6a0].="" 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

## **2-3a** [K100] 1. Engine Trouble in General

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
4) Engine stalls after initial	Fuel injection system <ref. td="" to<=""><td>2-7 [T6A0].&gt;</td><td>А</td></ref.>	2-7 [T6A0].>	А
combustion.	Intake system	Loosened or cracked intake uct	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 stall	Fuel injection system <ref. td="" to<=""><td></td><td>Α</td></ref.>		Α
	• 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
		Defective throttle body gasket	В
		Defective PCV valve	С
		Loosened oil filter cap	В
		Dirty air cleaner element	С
	Fuel line	Defective fuel pump and relay	С
		Clogged fuel line	С
		Lack of or insufficient fuel	В
	Belt	Defective timing	С
	Compression	Incorrect valve clearance	В
		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	В
		Incorrect valve timing	Α
		Improper engine oil (low viscosity)	В
	Lubrication system	Incorrect oil pressure	В
		Defective rocker cover gasket	С
	Cooling system	Overheating	С
	• Others	Malfunction of evaporative emission control system	Α
		Stuck or damaged throttle valve	В
		Accelerator cable out of adjustment	С

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
3. Low output, hesitation and	• Fuel injection system <ref. t<="" td=""><td>o 2-7 [T6A0].&gt;</td><td>А</td></ref.>	o 2-7 [T6A0].>	А
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 filter 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		В
		Loosened spark plugs or defective gasket	
		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	Α
		Improper engine oil (low viscosity)	В
	Lubrication system	Incorrect oil pressure	В
	<ul> <li>Cooling system</li> </ul>	Overheating	С
		Over cooling	С
	Others	Malfunction of evaporative emission control system	Α
4. Surging	• Fuel injection system <ref. 2-7="" [t6a0].="" to=""></ref.>		Α
	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
		Defective throttle body gasket	В
		Defective PCV valve	В
		Loosened oil filter 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
	Compression	Loosened spark plugs or defective gasket	C
		Loosened cylinder head bolts or defective gasket	C
			C
		Improper valve seating     Defective valve stem	C
		Worn or broken valve spring	С
		Worn or stuck piston rings, cylinder and piston	C
		Incorrect valve timing	Α
		Improper engine oil (low viscosity)	В
	Cooling system	Overheating	В
	Others	Malfunction of evaporative emission control system	С

# **2-3a** [K100] 1. Engine Trouble in General

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
5. Engine does not return to idle.	Fuel injection system <ref. td="" to<=""><td>2-7 [T6A0].&gt;</td><td>Α</td></ref.>	2-7 [T6A0].>	Α
	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)	• Fuel injection system <ref. 2-7="" [t6a0].="" to=""></ref.>		Α
	Cooling system	Overheating	В
	Others	Malfunction of evaporative emission control system	В
7. After burning in exhaust	• Fuel injection system <ref. t<="" td=""><td>o 2-7 [T6A0].&gt;</td><td>Α</td></ref.>	o 2-7 [T6A0].>	Α
system	<ul> <li>Intake system</li> </ul>	Loosened or cracked intake duct	С
		Loosened or cracked PCV hose	С
		Loosened or cracked vacuum hose	В
		Defective PCV valve	В
		Loosened oil filter 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	С
		Incorrect valve timing	А
	Lubrication system	Incorrect oil pressure	С
	Cooling system	Over cooling	С
	Others	Malfunction of evaporative emission control system	С
8. Knocking	• Fuel injection system <ref. t<="" td=""><td>o 2-7 [T6A0].&gt;</td><td>Α</td></ref.>	o 2-7 [T6A0].>	Α
	<ul> <li>Intake system</li> </ul>	Loosened oil filter cap	В
	Belt	Defective timing	В
	<ul> <li>Compression</li> </ul>	Incorrect valve clearance	С
		Incorrect valve timing	В
	<ul> <li>Cooling system</li> </ul>	Overheating	Α
9. Excessive engine oil con-	Intake system	<ul> <li>Loosened or cracked PCV hose</li> </ul>	Α
sumption		Defective PCV valve	В
		Loosened oil filter cap	С
	<ul> <li>Compression</li> </ul>	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 filter 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

### **DIAGNOSTICS**

# [K100] **2-3a**1. Engine Trouble in General

TROUBLE	PROBLEM PARTS, ETC.	POSSIBLE CAUSE	RANK
10. Excessive fuel consump-	• Fuel injection system <ref. 2-7="" [t6a0].="" to=""></ref.>		А
tion	Intake system	Dirty air cleaner element	А
	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
	<ul> <li>Lubrication system</li> </ul>	Incorrect oil pressure	С
	Cooling system	Over cooling	С
	Others	Accelerator cable out of adjustment	В