

2012 - Mazda6 - Engine

QUICK DIAGNOSTIC CHART [MZR 2.5]

X: Applied

Troubleshooting item			
		Starter motor malfunction (Mechanical or electrical)	
		Starter circuit including ignition switch ^{*1} /relay block ^{*2} is open	
		Starter interlock switch malfunction (MTX)	
		Improper engine oil level	
		Low or dead battery	
		Charging system malfunction	
		Improper engine compression	
		Improper valve timing	
		Hydrolocked engine	
		Improper engine oil viscosity	
		Improper dipstick	
		Base engine malfunction	
		Drive plate (ATX) or flywheel (MTX) are seized	
		Improper tension or damaged drive belts/auto tensioner bearing malfunction	
		Improper engine coolant level	
		Water and anti-freeze mixture is improper	
		Cooling system malfunction (Radiator, hoses, overflow system, thermostat etc.)	
		Cooling fan system malfunction	
1	Melting of main or other fuses		
2	MIL illuminates		

[illegible]

[illegible]

*1

Without advanced keyless entry and push button start system

*2

With advanced keyless entry and push button start system

X: Applied

Troubleshooting item	mansaxle mounts are improperly installed meet is improperly installed system operation improperly timing system malfunction e system malfunction ment clogging or restriction m intake-air system (Loose tubes, cracks breakage) perature is too hot f drive-by-wire control system is not completed control system improper operation malfunction (stuck open or close, restriction) control system operates with brake override system e-air system malfunction ge (vacuum hose damage, misrouting) alfunction (e.g. open, short or cracks) timing misadjustment & crankshaft pulley misadjustment) function
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**g, inoperative)
tor, fuel injector O-ring)**

oid valve, charcoal canister)

Troubleshooting item

Troubleshooting item		Erratic signal to ignition coil	CKP sensor is damaged. (e.g. open or short circuit)	Crankshaft pulley is damaged	Improper gap between CKP sensor and crankshaft	Fuel pump malfunction (Mechanically or electrically)	Pressure regulator malfunction	Fuel hoses restriction or clogging	Fuel injectors malfunction (Leakage or clogging, inoper	Fuel leakage from fuel system (including insulator, fuel i	Fuel filters restriction or clogging	CMP sensor is damaged (e.g. open or short circuit)	Camshaft is damaged	Improper air/fuel ratio mixture control	Exhaust system restriction or clogging	Catalytic converter malfunction	EGR system malfunction	Fuel-filler cap malfunction	EVAP control system malfunction (Purge solenoid valve	Fuel into evaporative purge hose	EVAP control system malfunction
1	Melting of main or other fuses																				
2	MIL illuminates		X									X		X							
3	Will not crank																				
4	Hard to start/long crank/erratic start/erratic crank	X	X	X	X	X	X	X		X	X				X		X		X		X
5	Engine stalls	After start/at idle	X	X	X	X	X	X	X	X					X		X		X		X
6	Cranks normally but will not start		X	X	X	X	X	X	X	X					X		X		X		X
7	Slow return to idle																				
8	Engine runs rough/rolling idle		X	X	X	X	X	X	X	X	X	X	X	X			X		X		X
9	Fast idle/runs on																				
10	Low idle/stalls during deceleration												X						X		X
	Engine stalls/quits	Acceleration/cruise		X	X	X	X	X	X		X	X	X	X			X		X	X	X
	Engine runs rough	Acceleration/cruise		X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
	Misses	Acceleration/cruise		X	X	X	X	X	X		X	X	X	X	X		X		X	X	X

11	Buck/jerk	Acceleration/cruise/deceleration		X	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
	Hesitation/stumble	Acceleration		X	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
	Surges	Acceleration/cruise		X	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
12	Lack/loss of power	Acceleration/cruise		X	X	X	X	X	X	X			X	X		X		X		X		X
13	Knocking/pinging	Acceleration/cruise	X				X	X	X													
14	Poor fuel economy		X				X	X	X			X				X						
15	Emission compliance		X				X	X	X			X	X	X	X	X	X	X	X			
16	High oil consumption/leakage																					
17	Cooling system concerns	Overheating																				
18	Cooling system concerns	Runs cold																				
19	Exhaust smoke		X				X	X	X	X		X	X									
20	Fuel odor (in engine compartment)						X	X			X	X								X		
21	Engine noise															X						
22	Vibration concerns (engine)																					
23	A/C does not work sufficiently																					
24	A/C is always on or A/C compressor runs continuously																					
25	A/C is not cut off under WOT conditions																					
26	Exhaust sulphur smell						X	X	X			X								X		X
27	Fuel refill concerns																					
28	Fuel filling shut off concerns																					
29	Spark plug condition		X				X	X	X	X	X				X	X						
30	ATX concerns	Upshift/downshift/engagement	(See SYMPTOM TROUBLESHOOTING ITEM TABLE [FS5A-EL] .)																			

X: Applied

[illegible]

10	Low idle/stalls during deceleration						X	X	X			X	X	
11	Engine stalls/quits	Acceleration/cruise	X	X		X				X	X	X	X	
	Engine runs rough	Acceleration/cruise	X	X		X				X	X	X	X	
	Misses	Acceleration/cruise	X	X		X				X	X		X	
	Buck/jerk	Acceleration/cruise/deceleration	X	X		X				X	X		X	
	Hesitation/stumble	Acceleration	X	X		X				X	X	X	X	
	Surges	Acceleration/cruise	X	X		X				X	X		X	
12	Lack/loss of power	Acceleration/cruise		X		X					X		X	
13	Knocking/pinging	Acceleration/cruise					X				X		X	X
14	Poor fuel economy			X									X	
15	Emission compliance			X							X			
16	High oil consumption/leakage			X										
17	Cooling system concerns	Overheating					X							
18	Cooling system concerns	Runs cold					X							
19	Exhaust smoke			X										
20	Fuel odor (in engine compartment)													
21	Engine noise													
22	Vibration concerns (engine)													
23	A/C does not work sufficiently													
24	A/C is always on or A/C compressor runs continuously													
25	A/C is not cut off under WOT conditions													
26	Exhaust sulphur smell													
27	Fuel refill concerns				X	X								

[illegible]

5	Engine stalls	After start/at idle			
6	Crank normally but will not start				
7	Slow return to idle				
8	Engine runs rough/rolling idle				
9	Fast idle/runs on				X
10	Low idle/stalls during deceleration				X
11	Engine stalls/quits	Acceleration/cruise			
	Engine runs rough	Acceleration/cruise			
	Misses	Acceleration/cruise			
	Buck/jerk	Acceleration/cruise/deceleration			
	Hesitation/stumble	Acceleration			
	Surges	Acceleration/cruise			
12	Lack/loss of power	Acceleration/cruise			
13	Knocking/pinging	Acceleration/cruise			
14	Poor fuel economy				
15	Emission compliance				
16	High oil consumption/leakage				
17	Cooling system concerns	Overheating			X
18	Cooling system concerns	Runs cold			
19	Exhaust smoke				
20	Fuel odor (in engine compartment)				
21	Engine noise				
22	Vibration concerns (engine)				

23	A/C does not work sufficiently			X
24	A/C is always on or A/C compressor runs continuously			X
25	A/C is not cut off under WOT conditions			
26	Exhaust sulphur smell			
27	Fuel refill concerns			
28	Fuel filling shut off concerns			
29	Spark plug condition			
30	ATX concerns	Upshift/downshift/engagement	(See SYMPTOM TROUBLESHOOTING ITEM TABLE [FS5A-EL] .)	

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		Cooling fan system malfunction	
1	Melting of main or other fuses		
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21	Engine noise				X							X	X				
22	Vibration concerns (engine)												X				
23	A/C does not work sufficiently																
24	A/C is always on or A/C compressor runs continuously																
25	A/C is not cut off under WOT conditions																
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2	MIL illuminates		X									X		X							
3	Will not crank																				
4	Hard to start/long crank/erratic start/erratic crank		X	X	X	X	X	X		X	X				X		X		X		X
5	Engine stalls	After start/at idle	X	X	X	X	X	X	X	X					X		X		X		X
6	Crankes normally but will not start		X	X	X	X	X	X	X	X					X		X		X		X
7	Slow return to idle																				
8	Engine runs rough/rolling idle		X	X	X	X	X	X	X	X	X	X	X	X			X		X		X
9	Fast idle/runs on																				
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	Engine stalls/quits	Acceleration/cruise		X	X	X	X	X	X		X	X	X	X			X		X	X	X
	Engine runs rough	Acceleration/cruise		X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
	Misses	Acceleration/cruise		X	X	X	X	X	X		X	X	X	X	X		X		X	X	X

11	Buck/jerk	Acceleration/cruise/deceleration		X	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
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	Surges	Acceleration/cruise		X	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X
12	Lack/loss of power	Acceleration/cruise		X	X	X	X	X	X	X			X	X		X		X		X		X
13	Knocking/pinging	Acceleration/cruise	X				X	X	X													
14	Poor fuel economy		X				X	X	X			X				X						
15	Emission compliance		X				X	X	X			X	X	X	X	X	X	X	X			
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