



**POWERTRAIN CONTROL SYSTEM  
ELECTRONICS DIAGNOSTIC GUIDE  
2002 F650-F750**

Fault Code	Circuit Index	Condition Description	Probable Causes
0603	PCM	Powertrain Control Module KAM test error	PCM or BATT was disconnected, fuse, open ckt.
0605	PCM	Powertrain Control Module ROM test error	PCM or BATT was disconnected, Internal PCM failure
0606	PCM	PCM processor fault	Internal PCM failure
0703	TEST	Brake switch B (BOO) circuit malfunction	Switch not detected during self-test, circuit, switch
0704	TEST	(CPP) Clutch input circuit malfunction	Switch not detected during self-test, circuit, switch
1118	MAT	Manifold Air Temp sensor out of range low	Short to ground MAT circuit, MAT sensor
1119	MAT	Manifold Air Temp sensor out of range high	Open/short to power circuit, MAT sensor
1139	WIFL	Water-in-Fuel Lamp circuit malfunction	WIF lamp, circuit failure, fuse, PCM
1140	WIF	Water-in-Fuel condition failure	Water in fuel, grounded circuit, shorted sensor, PCM
1184	TEST	Engine oil temp out of self test range	Engine too cold/hot, leaking thermostat, ckt, sensor
1209	IPR	ICP system fault	IPR valve stuck
1210	IPR	ICP above expected level	ICP sensor, open signal return
1211	IPR	ICP pressure above/below desired	IPR valve, grounded IPR circuit, high pressure oil leak
1212	ICP	ICP press not detected during crank	low oil in reservoir, IPR fault
1218	CI	CI stuck high	CI circuit intermittent open
1219	CI	CI stuck low	CI circuit intermittent short to ground
1247	MAP	Turbo boost pressure low	MAP hose, sensor, EBP sys, intake leaks, Turbo
1248	MAP	Turbo boost pressure not detected	MAP hose, sensor, EBP sys, intake leaks, Turbo
1249	WG	Waste-gate failure steady state	GND short, plugged hose/port, solenoid, actuator
1261-1268	INJ	High to low side short cyl#1 - #8	Short circuit, shorted injector, failed IDM
1271-1278	INJ	High to low side open cyl#1 - #8	Open circuit, open injector, failed IDM
1280	ICP	ICP circuit out of range low	Open/grounded circuit, ICP sensor, PCM
1281	ICP	ICP circuit out of range high	Circuit shorted to power, ICP sensor, PCM
1282	IPR	Excessive ICP pressure	Faulty IPR regulator (sticking), circuit short to ground
1283	TEST	IPR circuit failure	Open/short circuit, loose connection
1284	TEST	ICP failure - aborts KOER test	See codes 1280, 1281, 1282, 1283, 1211
1291	INJ	High side short to grd or B+, bank #1 (right)	Shorted circuit, faulty IDM
1292	INJ	High side short to grd or B+, bank #2 (left)	Shorted circuit, faulty IDM
1293	INJ	High side open bank #1 (right)	Open circuit, faulty IDM
1294	INJ	High side open bank #2 (left)	Open circuit, faulty IDM
1295	INJ	Multiple faults on bank #1 (right)	Miswired connector or harness, short to ground
1296	INJ	Multiple faults on bank #2 (left)	Miswired connector or harness, short to ground
1297	INJ	High sides shorted together	Shorted wires, faulty IDM
1298	IDM	IDM failure	Internal IDM failure
1316	IDM	Injector circuit/IDM codes detected	Injector circuit/IDM codes detected
1464	TEST	A/C demand out of self test range	A/C on during self-test, circuit shorted to power
1502	TEST	Invalid test - APCM functioning	APCM active while KOER test is running
1531	TEST	Invalid test - accelerator pedal movement	AP detected during self-test, switch or circuit fault.
1536	PBA	Parking brake switch circuit failure	Switch not detected during self-test, circuit, switch
1660	OCC	OCC signal high	High system voltage, internal PCM fault
1661	OCC	OCC signal low	Low system voltage, internal PCM fault
1662	IDM-EN	IDM_EN circuit failure	Open IDM relay, blown fuse, open/shorted circuit
1663	FDSCS	FDSCS circuit failure	Open/shorted circuit, faulty IDM, PCM
1667	CI	CI circuit failure	Open/shorted circuit, faulty IDM, PCM
1668	EF	PCM-IDM diagnostic communication error	Open/shorted EF or FDSCS, open IDM ground
1670	EF	EF signal not detected	Open/shorted EF circuit
1902	ASM	Allison kickdown sol. relay circuit failure	Circuit, relay, PCM
1903	ASM	Allison kickdown sol. circuit low voltage	Circuit, fuse, solenoid, PCM
1904	ASM	Allison kickdown sol. circuit high voltage	Circuit, relay, PCM

**(FMEM) MIL illumination occurs after 1st fault**