

ELECTRONIC CONTROL SYSTEM

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FLASH CODE CIRCUIT INDEX	Sec.3.5 Page No.	FAULT DESCRIPTION
111 ECM 86		No Fault Detected – Flash code only
112 ECM PWR 98		Electrical System Voltage B+ out of range HIGH
113 ECM PWR 98		Electrical System Voltage B+ out of range LOW
114* ECT 104		Engine Coolant Temperature signal out of range LOW
115* ECT 104		Engine Coolant Temperature signal out of range HIGH
121* MAP 182		Manifold Absolute Pressure Frequency Out of Range
122* MAP 182		Manifold Absolute Pressure Signal is inactive
123 MAP 182		Man Absolute Press (MAP) above spec. level at low idle
124* ICP 146		Injection Control Pressure Signal out of range LOW
125 ICP 146		Injection Control Pressure Signal out of range HIGH
131* APS/IVS 4		Accelerator Position Signal out of range LOW
132* APS/IVS 4		Accelerator Position Signal out of range HIGH
133* APS/IVS 5		Accelerator Position Signal in-range fault
134* APS/IVS 5		Accelerator Position and Idle Validation disagree
135* APS/IVS 5		Idle Validation Switch circuit fault
141 VSS 238		Vehicle Speed Signal out of range LOW
142 VSS 238		Vehicle Speed Signal out of range HIGH
143 CMP 32		Wrong number of CMP signal transitions per cam revolution
144 CMP 32		CMP Signal noise detected
145 CMP 33		CMP Signal inactive while ICP has increased
151 BARO 12		Barometric Pressure Signal out of range HIGH
152 BARO 12		Barometric Pressure Signal out of range LOW
154 IAT 140		Intake Air Temperature Signal out of range LOW
155 IAT 140		Intake Air Temperature Signal out of range HIGH
211* EOP 118		Engine Oil Pressure Signal out of range LOW
212* EOP 118		Engine Oil Pressure Signal out of range HIGH
213 SCCS 190		Remote Throttle Signal out of range LOW
214 SCCS 190		Remote Throttle Signal out of range HIGH
221 SCCS 189		SCCS Switch or Circuit fault
222 BRAKE 19		Brake Switch Circuit Fault
223 DCL/ATA 39		VPM not communicating with ECM

* – Indicates WARN ENGINE LAMP on when fault is set.

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FLASH CODE CIRCUIT INDEX	Sec.3.5 Page No.	FAULT DESCRIPTION
224 KAM PWR 176		KAM Corrupt
231 DCL/ATA 39		ATA Common Fault
232 DCL/ATA 40		Unable to forward ECM message to ATA DCL
233 TACH 212		Tachometer buffer is inactive
234 DCL/ATA 40		Unable to forward ATA message to ECM
235 DCL/ATA 40		VPM / ECM DCL fault
241 IPR 168		Injection Control Pres. .Regulator OCC Self Test failed
242 ECM/IDM 91		FDCS circuit to IDM OCC Self Test failed
243 IDM PWR 152		IDM Power Relay OCC Self Test failed
244 EDL 110		Engine to Transmission Data Line (EDL) OCC Fault
245 EPR 132		Exhaust Pressure Regulator OCC Self Test failed
251 GPC 136		Glow Plug Controller OCC Self Test failed
252 GPC 136		Glow Plug Lamp OCC Self Test failed
253 ECM/IDM 91		Fuel Inj. Sync Circuit OCC Self Test failed
254 ECM 86		OCC Self Test ECM test circuit out of range HIGH
255 ECM 86		OCC Self Test ECM test circuit out of range LOW
311* EOT 126		Engine Oil Temperature Signal out of range LOW
312* EOT 126		Engine Oil Temperature Signal out of range HIGH
313 EOP** 118		Engine Oil Pressure below warning level
314 EOP** 119		Engine Oil Pressure below critical level
315*		Engine Speed (Tach RPM) limit exceeded
316 ECT 105		Engine Coolant Temperature Unable to Reach commanded set point
321 ECT** 105		Engine Coolant Temperature above warning level
322 ECT** 105		Engine Coolant Temperature above critical level
323 ECL 79		Engine Coolant Level below warning / critical level
324		Idle Shutdown Timer Enabled Engine Shutdown
325 ECT 105		Power reduced, matched to cooling system performance
331* IPR 168		Injection Control Pressure above system working range
332* ICP 146		Injection Control Pressure above spec with engine off
333* IPR 168		Injection Control Pressure above/ below desired level

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** – Faults only available if Engine Protection is enabled.

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FLASH CODE CIRCUIT INDEX	Sec.3.5 Page No.	FAULT DESCRIPTION
334* IPR 168		ICP unable to achieve setpoint (poor performance)
335* IPR 168		ICP unable to build pressure during cranking
341 EBP 132		Exhaust Back Pressure signal out of range LOW
342 EBP 132		Exhaust Back Pressure signal out of range HIGH
343 EBP 132		Excessive Exhaust Back Pressure
344 EBP 131		Exhaust Back Pressure above Spec. with Engine OFF
351 EBP 131		Exhaust Back Pressure below expected level at high engine speeds
352 EBP 131		Exhaust Back Pressure above or below desired level
421 INJ 160		LOW to HIGH Side Open – Cyl 1
422 INJ 160		LOW to HIGH Side Open – Cyl 2
423 INJ 160		LOW to HIGH Side Open – Cyl 3
424 INJ 160		LOW to HIGH Side Open – Cyl 4
425 INJ 160		LOW to HIGH Side Open – Cyl 5
426 INJ 160		LOW to HIGH Side Open – Cyl 6
427 INJ 160		LOW to HIGH Side Open – Cyl 7
428 INJ 160		LOW to HIGH Side Open – Cyl 8
431 INJ 160		LOW to HIGH Side Short – Cyl 1
432 INJ 160		LOW to HIGH Side Short – Cyl 2
433 INJ 160		LOW to HIGH Side Short – Cyl 3
434 INJ 160		LOW to HIGH Side Short – Cyl 4
435 INJ 160		LOW to HIGH Side Short – Cyl 5
436 INJ 160		LOW to HIGH Side Short – Cyl 6
437 INJ 160		LOW to HIGH Side Short – Cyl 7
438 INJ 160		LOW to HIGH Side Short – Cyl 8
441 INJ 160		LOW side short to VBAT – Cyl 1
442 INJ 160		LOW side short to VBAT – Cyl 2
443 INJ 160		LOW side short to VBAT – Cyl 3
444 INJ 160		LOW side short to VBAT – Cyl 4
445 INJ 160		LOW side short to VBAT – Cyl 5
446 INJ 160		LOW side short to VBAT – Cyl 6
447 INJ 160		LOW side short to VBAT – Cyl 7
448 INJ 160		LOW side short to VBAT – Cyl 8

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FLASH CODE CIRCUIT INDEX	Sec.3.5 Page No.	FAULT DESCRIPTION
451 INJ 161		LOW side short to ground – Cyl 1
452 INJ 161		LOW side short to ground – Cyl 2
453 INJ 161		LOW side short to ground – Cyl 3
454 INJ 161		LOW side short to ground – Cyl 4
455 INJ 161		LOW side short to ground – Cyl 5
456 INJ 161		LOW side short to ground – Cyl 6
457 INJ 161		LOW side short to ground – Cyl 7
458 INJ 161		LOW side short to ground – Cyl 8
461 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 1
462 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 2
463 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 3
464 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 4
465 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 5
466 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 6
467 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 7
468 Perf. Diag.		Cyl. Contribution Test Failure – Cyl 8
511* INJ 161		Bank 1 has multiple faults
512* INJ 161		Bank 2 has multiple faults
513* INJ 161		High Side to Bank 1 Open
514* INJ 161		High Side to Bank 2 Open
515* INJ 161		Bank 1 High Side Short to Ground or VBAT
521* INJ 161		Bank 2 High Side Short to Ground or VBAT
522* IDM PWR 153		IDM Internal Failure
523 IDM PWR 153		IDM power voltage is LOW
524* INJ 161		Both High Side Switches shorted together
531* ECM/IDM 91		Cylinder Identification (CI) Signal Low
532* ECM/IDM 91		Cylinder Identification (CI) Signal high
541* ECM/IDM 92		IDM Feedback TOGGLE not detected by ECM
543* ECM/IDM 92		IDM faults not received
544 INJ 162		Injector Fault in Bank 2
545 INJ 162		Injector Fault in Bank 1
612* CMP 33		Incorrect ECM installed for CMP (timing) wheel

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FLASH CODE CIRCUIT INDEX	Sec.3.5 Page No.	FAULT DESCRIPTION
613* VPM 231		Installed ECM not compatible with VPM Software
614* VPM 231		Installed VPM not compatible with ECM software
615 ECM 86, 231 ..		Programmable Parameter KAM Corrupt fault
621* VPM 231		Engine using MFG. Default rating program engine
622* VPM 231		Engine using Field Default rating
623* VPM 232		Invalid Engine Rating Code; Check VPM programming
625 ECM 86		Module Software Background Process was inactive
631 ECM 86		ROM (Read Only Memory) Self Test fault
632 ECM 86		RAM Memory–CPU Self Test Fault
633 DCL/ATA 41		VPM is communicating incorrectly with ECM
634 VPM 232		Internal Fuel meter memory location in error
635 VPM 233		Internal Hourmeter memory location in error
641 VPM 233		Internal Odometer memory location in error
642 VPM 233		Internal Fuelmeter Fault
643 VPM 233		Internal Hourmeter Fault
644 VPM 233		Internal Odometer Fault
645 VPM 233		Internal EEPROM memory location error
651 VPM 233		Feature memory data content corrupted
652 VPM 234		Engine/Fuel memory data content corrupted
653 VPM 234		Engine/Rating memory data content corrupted
654 VPM 234		Watchdog Timeout

* — Indicates WARN ENGINE LAMP on when fault is set.