

## Service Procedure

### FLASH CODE CIRCUIT INDEX

FLASH CODE	CIRCUIT INDEX	FAULT DESCRIPTION
<a href="#">111</a>	ECM	No Fault Detected - Flash code only
<a href="#">112</a>	ECM PWR	Electrical System Voltage B+ out of range HIGH
<a href="#">113</a>	ECM PWR	Electrical System Voltage B+ out of range LOW
<a href="#">114*</a>	ECT	Engine Coolant Temperature signal out of range LOW
<a href="#">115*</a>	ECT	Engine Coolant Temperature signal out of range HIGH
<a href="#">121*</a>	MAP	Manifold Absolute Pressure Frequency Out of Range
<a href="#">122*</a>	MAP	Manifold Absolute Pressure Signal is inactive
<a href="#">123</a>	MAP	Manifold Absolute Pressure (MAP) above spec. level at low idle
<a href="#">124*</a>	ICP	Injection Control Pressure Signal out of range LOW
<a href="#">125</a>	ICP	Injection Control Pressure Signal out of range HIGH
<a href="#">131*</a>	APS/IVS	Accelerator Position Signal out of range LOW
<a href="#">132*</a>	APS/IVS	Accelerator Position Signal out of range HIGH
<a href="#">133*</a>	APS/IVS	Accelerator Position Signal in-range fault
<a href="#">134*</a>	APS/IVS	Accelerator Position and Idle Validation disagree
<a href="#">135*</a>	APS/IVS	Idle Validation Switch circuit fault
<a href="#">141</a>	VSS	Vehicle Speed Signal out of range LOW
<a href="#">142</a>	VSS	Vehicle Speed Signal out of range HIGH
<a href="#">143</a>	CMP	Wrong number of CMP signal transistions per cam revolution
<a href="#">144</a>	CMP	CMP signal noise detected
<a href="#">145</a>	CMP	CMP signal inactive while ICP has increased
<a href="#">151</a>	BARO	Barometric Pressure Signal out of range HIGH
<a href="#">152</a>	BARO	Barometric Pressure Signal out of range LOW

<a href="#">154</a>	IAT	Intake Air Temperature Signal out of range LOW
<a href="#">155</a>	IAT	Intake Air Temperature Signal out of range HIGH
<a href="#">211*</a>	EOP	Engine Oil Pressure Signal out of range LOW
<a href="#">212*</a>	EOP	Engine Oil Pressure Signal out of range HIGH
<a href="#">213</a>	SCCS	Remote Throttle Signal out of range LOW
<a href="#">214</a>	SCCS	Remote Throttle Signal out of range HIGH
<a href="#">221</a>	SCCS	SCCS Switch or Circuit fault
<a href="#">222</a>	BRAKE	Brake Switch Circuit fault
<a href="#">223</a>	DCL/ATA	VPM not communicating with ECM
<a href="#">224</a>	KAM PWR	KAM Corrupt
<a href="#">231</a>	DCL/ATA	ATA common fault
<a href="#">232</a>	DCL/ATA	Unable to forward ECM message to ATA DCL
<a href="#">233</a>	TACH	Tachometer Buffer is inactive
<a href="#">234</a>	DCL/ATA	Unable to forward ATA message to ECM
<a href="#">235</a>	DCL/ATA	VPM/ECM DCL fault
<a href="#">241</a>	IPR	Injection Pressure Regulator OCC Self Test failed
<a href="#">242</a>	ECM/IDM	FDCS signal to IDM OCC Self Test failed
<a href="#">243</a>	IDM PWR	IDM Power Relay OCC Self Test failed
<a href="#">244</a>	EDL	Engine to Transmission Data Line (EDL) OCC fault
<a href="#">253</a>	ECM/IDM	Fuel Injection Sync Circuit OCC Self Test failed
<a href="#">254</a>	ECM	OCC Self Test ECM test circuit out of range HIGH
<a href="#">255</a>	ECM	OCC Self Test ECM test circuit out of range LOW
<a href="#">311*</a>	EOT	Engine Oil Temperature Signal out of range LOW
<a href="#">312*</a>	EOT	Engine Oil Temperature Signal out of range HIGH
<a href="#">313</a>	EOP**	Engine Oil Pressure below warning level
<a href="#">314</a>	EOP**	Engine Oil Pressure below critical level
315*	-	Engine Speed (Tach RPM) limit exceeded
<a href="#">321</a>	ECT**	Engine Coolant Temperature above warning level
<a href="#">322</a>	ECT**	Engine Coolant Temperature above critical level
<a href="#">323</a>	ECL	Engine Coolant Level below warning / critical level
<a href="#">325</a>	ECT	Power reduced, matched to cooling system performance

<a href="#">331*</a>	IPR	Injection Control Pressure above system working range
<a href="#">332*</a>	ICP	Injection Control Pressure above spec with engine off
<a href="#">333*</a>	IPR	Injection Control Pressure above / below desired level
<a href="#">421</a>	INJ	LOW to HIGH Side Open - Cyl 1
<a href="#">422</a>	INJ	LOW to HIGH Side Open - Cyl 2
<a href="#">423</a>	INJ	LOW to HIGH Side Open - Cyl 3
<a href="#">424</a>	INJ	LOW to HIGH Side Open - Cyl 4
<a href="#">425</a>	INJ	LOW to HIGH Side Open - Cyl 5
<a href="#">426</a>	INJ	LOW to HIGH Side Open - Cyl 6
<a href="#">431</a>	INJ	LOW to HIGH Side Short - Cyl 1
<a href="#">432</a>	INJ	LOW to HIGH Side Short - Cyl 2
<a href="#">433</a>	INJ	LOW to HIGH Side Short - Cyl 3
<a href="#">434</a>	INJ	LOW to HIGH Side Short - Cyl 4
<a href="#">435</a>	INJ	LOW to HIGH Side Short - Cyl 5
<a href="#">436</a>	INJ	LOW to HIGH Side Short - Cyl 6
<a href="#">441</a>	INJ	LOW Side Short to VBAT- Cyl 1
<a href="#">442</a>	INJ	LOW Side Short to VBAT- Cyl 2
<a href="#">443</a>	INJ	LOW Side Short to VBAT- Cyl 3
<a href="#">444</a>	INJ	LOW Side Short to VBAT- Cyl 4
<a href="#">445</a>	INJ	LOW Side Short to VBAT- Cyl 5
<a href="#">446</a>	INJ	LOW Side Short to VBAT- Cyl 6
<a href="#">451</a>	INJ	Low Side Short to ground - Cyl 1
<a href="#">452</a>	INJ	Low Side Short to ground - Cyl 2
<a href="#">453</a>	INJ	Low Side Short to ground - Cyl 3
<a href="#">454</a>	INJ	Low Side Short to ground - Cyl 4
<a href="#">455</a>	INJ	Low Side Short to ground - Cyl 5
<a href="#">456</a>	INJ	Low Side Short to ground - Cyl 6
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
<a href="#">511*</a>	INJ	Multiple Faults Bank 1
<a href="#">512*</a>	INJ	Multiple Faults Bank 2
<a href="#">513*</a>	INJ	High Side to Bank 1 Open
<a href="#">514*</a>	INJ	High Side to Bank 2 Open
<a href="#">515*</a>	INJ	Bank 1 High Side Short to ground or VBAT
<a href="#">521*</a>	INJ	Bank 2 High Side Short to ground or VBAT
<a href="#">522*</a>	IDM PWR	IDM Fault
<a href="#">523*</a>	IDM PWR	IDM power voltage is low
<a href="#">524*</a>	INJ	Both High Side Switches shorted together
<a href="#">531*</a>	ECM / IDM	Fuel Injection Sync Signal Low: Cylinder Identification Signal (CI)
<a href="#">532*</a>	ECM / IDM	Fuel Injection Sync Signal High: Cylinder Identification Signal (CI)
<a href="#">541*</a>	ECM / IDM	IDM Feedback TOGGLE not detected by ECM
<a href="#">543*</a>	ECM / IDM	IDM faults not received
<a href="#">544*</a>	INJ	Injector Fault in Bank 2
<a href="#">545*</a>	INJ	Injector Fault in Bank 1
<a href="#">612*</a>	CMP	Incorrect ECM installed for CMP (timing) wheel
<a href="#">613*</a>	VPM	Installed ECM not compatible with VPM software
<a href="#">614*</a>	VPM	Installed ECM not compatible with ECM software
<a href="#">615</a>	ECM	Programmable parameter KAM Corrupt fault
<a href="#">621*</a>	VPM	Engine using MFG. Default rating Program Engine
<a href="#">622*</a>	VPM	Engine using Field Default rating
<a href="#">623*</a>	VPM	Invalid Engine rating Code: Check VPM programming
<a href="#">625</a>	ECM	Module software Background Process was inactive
<a href="#">631</a>	ECM	ROM (Read Only Memory) Self Test Fault
<a href="#">632</a>	ECM	RAM Memory - CPU Self Test Fault
<a href="#">633</a>	DCL / ATA	VPM is communicating incorrectly with ECM
<a href="#">634</a>	VPM	Internal Fuelmeter memory location in error
<a href="#">635</a>	VPM	Internal Hourmeter memory location in error

<a href="#">641</a>	VPM	Internal Odometer memory location in error
<a href="#">642</a>	VPM	Internal Fuelmeter fault
<a href="#">643</a>	VPM	Internal Hourmeter fault
<a href="#">644</a>	VPM	Internal Odometer fault
<a href="#">645</a>	VPM	Internal EEPROM memory location error
<a href="#">651</a>	VPM	Feature memory data content corrupted
<a href="#">652</a>	VPM	Engine/Fuel memory data content corrupted
<a href="#">653</a>	VPM	Engine/Rating memory data content corrupted
<a href="#">654</a>	VPM	Watchdog Timeout

**\*- Indicates WARN ENGINE LAMP on when fault is set.**

**\* \*- Faults only available if Engine Protection is enabled**

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