ERROR INDICATOR LIGHT

Autronic ECU and Knock Processor modules are equipped with a red LED indicator that flashes error codes, quickly reporting and allowing the identification of fault conditions without the use of a laptop computer.

Error conditions include:

Faulty sensors	*Out of range signals*
Electrical interference	*Operation risking engine durability*
Internal ECU malfunction	

This indicator is located near the main connector on Autronic wire-in models, however on plug-in models and Knock Processors it is PCB mounted. The wire-in models SMC, SM3 & SM4 and all plug-in models allow connection of a remote indicator light (typically connected to the vehicles instrument cluster 'Check Engine Light'). Each time the ECU is activated (at ignition on) the light initially reports all previously detected errors as ERROR HISTORY error codes. If no ERROR HISTORY codes are current, this no error condition is reported as 2 flashes 2.5 seconds apart. Ten seconds after the completion of the ERROR HISTORY code/s (or no error signalling), any new errors detected since ignition on are reported. Further new errors are reported as soon they are detected.
 ERROR HISTORY codes repeat at each ECU activation until the fault is repaired and the engine has been started and warmed-up 20 times (from cold to normal operating temperature). This error memory feature allows the engine's user reasonable time to 'fault find' difficult intermittent faults, or drive in 'limp-home mode' to a qualified service centre for repair. When the repair is completed, the old stored error codes may be erased immediately by using the laptop calibration program[1,2]. Longer duration error history information (255 engine warm-up cycles since its last occurrence) and error history erasure features are also available in the laptop calibration program.

Error code format:
1. Error codes are all 2 digits, each digit comprising a sequence of 0.5 second on and 0.5 second off flashes.
2. The 2 digits of each code are separated by a gap 2.5 seconds.
3. Error codes are separated by 5 second pause.
4. 'As detected' error codes commence 10 seconds after the completion of the ignition-on ERROR HISTORY code reporting.

Normal error free Engine, and ECU or processor operation should present only 2 flashes 2.5 seconds apart at ignition on. This is indicating that the ECU is without any stored ERROR HISTORY and has not detected any error/s since ignition on.

See relevant error listing document for codes specific to your product.

NOTES:
1. Erasure of ECU ERROR HISTORY using the Laptop software is a single step operation. Erasure is only possible for errors that have been resolved (ie. a display value of "NOW" cannot be reset).
2. Specific Autronic Knock Processor modules are equipped with an Error Reset Push Button that initiates a history reset. See the relevant Knock module error code document for its operation.

Example of error indication: Air Intake Temperature fault.

User Action	System Error	ECU Error HISTORY Memory	ECU Indication	Interpretation
1. No Power	-	Nil	-	-
2. Ignition on	Nil	Nil	1 flash, pause 2.5 sec then 1 flash	Code 11, no ERROR HISTORY
			No further flash	No error since Ignition on
3. Disconnect air temp sensor	21	Nil	2 flashes, pause 2.5 sec then 1 flash	Code 21 Air intake temperature sensor now faulty
4. Ignition off	-	21	-	-
5. Ignition on	21	21	2 flashes, pause 2.5 sec then 1 flash	ERROR HISTORY code 21 Air intake temperature sensor previously faulty
			No flashes for 10 sec then 2 flashes, pause 2.5 sec then 1 flash	Code 21 Air intake temperature sensor still faulty
6. Reconnect air temp sensor	Nil	21	-	-
7. Ignition off	-	21	-	-
8. Ignition on	Nil	21	2 flashes, pause 2.5 sec then 1 flash	ERROR HISTORY code 21 Air intake temp previously faulty
			No further flash	No error since Ignition on