

Washington State Patrol

BREATH TEST PROGRAM

Technical Manual

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Impaired Driving Section
Forensic Laboratory Services Bureau
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8 BREATH TEST INSTRUMENT CODE INTERPRETATION

8.1 DRAEGER ALCOTEST 9510 POLICY

The Draeger 9510 breath test instrument will record and store in memory the occurrence of several different codes. These are ultimately downloaded to the server for storage in the instruments database. The following is a list of the codes generated by the instrument and their interpretation.

Software Status Codes

**Codes display in the "Sts" field in WebDMS*

Number	Status Code Name	Description
1	TEST ABORTED	Test procedure was aborted
3	CAL GAS SUPPLY	Minimum flow not observed from dry-gas cylinder or simulator. Simulator or cylinder not
4	ADJUST ERROR	An IR or EC sensor problem was observed during the Calibration Procedure
5	BLANK CHECK INCORRECT	The IR difference between the pre- and post purge (calculated concentration) too high
6	ALCOHOL IN AMBIENT AIR	After purging, the ec measured ambient alcohol concentration being greater than threshold level
7	INVALID SAMPLE	Mouth alcohol detected
8	INTERFERENT	Interfering substances detected
9	DETECTOR OVERFLOW	The calculated breath alcohol concentration exceeded the maximum range.
10	SAMPLES OUTSIDE 10%	The comparison of calculated breath test results failed. IR values from subject sample 1 and 2 were compared and exceeded acceptable limits.
11	DETECTOR OVERFLOW	Calculated breath test concentration > max.
12	ALC. CONC. NOT	Requirements for plateau detection not met.
13	BLOWING NOT ALLOWED	Flow through breath hose is detected when the instrument is not expecting a flow
14	TIMED OUT	Maximum time for delivering a breath sample is
15	BLOWING TIME TOO	Blowing time is too low
17	MIN. VOLUME NOT	Delivered breath volume is too low
21	CAL. STANDARD FAILED	The calculated cal-check gas concentration did not meet the tolerance limits
23	COMMUNICATION ERROR	A communication error occurred between processors within the instrument
24	QUICK RESET	A quick reset is executed
28	PUMP ERROR	Minimum purging volume (0.5l) was not met. Or maximum purging time was exceeded



34	INHALATION	Negative breath flow was detected during
37	RTC PROBLEM	Real Time Clock hardware error detected
38	HARDWARE ERROR	General indicator for hardware related error
39	INTERNAL STANDARD ERROR	The results of the internal standard measurement were outside of the tolerance limits.
40	CHECK AIRWAY	Observed flow rate during purging indicates possible blockage of the breath hose.
41	DATA INPUT TIMEOUT	Data entry activity was not completed within the allowable time. No keyboard activity.
42	BATTERY VOLTAGE	The DC power supply drops below 10.5 VDC.
43	FLASH DELAY ERROR	A potential problem was observed during the
45	DATALOGGING ERROR	A problem was observed while sending or storing information to the database
46	REFUSAL	Subject Refusal
49	OPERATOR TIMEOUT	Time for operator's response (e.g. no button pressed on message box) is expired
50	PUMP ERROR 2	The instrument was not able to sufficiently clear the cuvette following analysis of a high-
51	PRINTER ERROR	Any hardware-related problem with the internal
52	SMARTCARD PIN ERROR	Problem with smartcard that can cause problems with communication with the host PC
53	SMARTCARD TIME ERROR	Problem with smartcard that can cause problems with communication with the host PC
54	SMARTCARD CANCEL ERROR	Problem with smartcard that can cause problems with communication with the host PC
55	SMARTCARD LOCK ERROR	Problem with smartcard that can cause problems with communication with the host PC
56	INCOMPLETE TEST	Operator assessment option was exercised (after pressing the "Stop" button).
61	EC AGING COMP. ERROR	A problem was observed with the aging compensation algorithm, caused by an invalid
68	DIAGNOSTIC CHECK	Any of the internal functionality tests were
70	DRYGAS CHECK ERROR	An empty or expired drygas cylinder was observed while checking the pressure of the dry
71	EC_SENSOR_STRESSED	May occur when the EC sensor's alcohol load is too high due to previously performed tests
72	OPERTOR INPUT ERROR	During the data entry sequence, the operator entered an invalid observation start time (in the future compared to current instrument time)
73	OPERTOR CERT EXPIRED	During the data entry sequence, the operator expiration date associated with the scanned



Hardware Status Codes

**Codes do not display in the "Sts" field in WebDMS*

Number	Name	Description
100	EEPROM_DEFECT	Previously calculated and stored checksum does not match the current calculated one.
101	RAM_DEFECT	Triggered if write operations to RAM buffer failed.
103	CLOCK_DATA_LOSS	Is triggered in case the plausibility check of the received time string (from WinCe) failed. (e.g. month=14 , or day=32)
104	SRC_CODE_CHECKSUM_ERROR	Is triggered if the cyclic calculation of the M16 Flash checksum failed.
106	U_SUPPLY_FAILURE	main power is below minimum limit
107	IR_PERIOD_AVG_FAILURE	IR period average too low or device not ready within 20 minutes of switching on the instrument
108	EC_OFFSET_FAILURE	Offset voltage of the ec-sensor out of range
109	EC_SENSOR_SYSTEM_DEFECT	The motor of the sampling unit does not move the piston as expected.
110	EC_MAXIMUM_NOT_FOUND	No EC signal maximum found



113	PUMPE_DEFEKT	Volume of 0,5l is not purged within predefined time or a blockage of any tube.
118	NTC_CUVETTE_DEFEKT	The voltage drop at the NTC of the cuvette heater indicates the NTC is likely broken or the temperature is higher than 75°C
119	NTC_HOSE_DEFEKT	The voltage drop at the NTC of the hose heater indicates the NTC is likely broken or the temperature is higher than 60°C
121	HEATER_REGULATION_ERROR FLASH_ERASE_ERROR	Temperature of cuvette or hose out of range
123	FLASH_ERASE_ERROR	Measurement System Flash memory Erase operation failed during configuration files update
124	COM_ERROR	error in communication between WinCE and M16 (measurement system)
127	EEPROM_DATA_LOSS	Verification of the calculated checksum does not match with the previously stored one
128	CONFIGURATION_ERROR	Fault in configuration files; possibly forbidden combination of settings/parameters;
135	EEPROM_DEFEKT_6	eeprom programming error
137	GP_EEPROM_DEFEKT	eeprom programming error (of the second eeprom area)
138	GP_ERASE_ERROR	error while eeprom programming
139	GP_CHECKSUM_ERROR	eeprom checksum incorrect
141	CRC_CFG_DATALOGGER	CRC check of configuration file failed
142	CRC_CFG_PRINTOUT	CRC check of configuration file failed



143	CRC_CFG_GRAPHIC	CRC check of configuration file failed
144	CRC_CFG_TEXTS	CRC check of configuration file failed
145	CRC_CFG_FONT	CRC check of configuration file failed
146	CRC_CFG_PARAMETER	CRC check of configuration file failed
147	CRC_CFG_MEAS_PROC	CRC check of configuration file failed
148	SMARTCARD_ID_ERROR	Problem with instrument serial number on smart card. Either the value stored does not match the value in EEPROM or there was a read error.
149	GP_WRITE_PTR_ERROR	Instrument attempted to store data out of the address range of the general purpose eeprom
150	GPEEPROM_COPY_CONSISTENCY_ERROR	CRC of the contents of the general purpose eeprom does not match the one in RAM
151	PRINTOUT_CONFIGURATION_ERROR	Configuration error for internal printer
152	SMARTCARD_INIT_ERROR	Smart card initialization failed
153	TRANSDUCER_DEFECT	Output value of transducer indicates transducer may be defective
1000	FW_ERROR_RESET	Error while resetting target (measurement system update)
1001	FW_ERROR_ID	Error while getting information from bootloader (measurement system update)
1002	FW_ERROR_CLEAR	Error while clearing target (measurement system update)
1003	FW_ERROR_BLANK	Error while blank check (measurement system update)
1004	FW_ERROR_PROG	Error while programming target (measurement system update)

1005	FW_ERROR_VALID	Error while making target valid (measurement system update)
2000	FILE_ERROR_SIGNATURE	File may already exist
2001	FILE_ERROR_FLOW_BAC	File may already exist
3007	COMM_ERROR_DEFTIMEACT	Internal communication delay
5000	ACT_ERROR_PENDING	Could not store activity. An activity is pending.
5001	ACT_ERROR_ACTIVE	Could not store activity. Another activity is active.
5002	ACT_ERROR_REQUESTED	Could not store activity. Another activity is requested.
5003	ACT_ERROR_ACTIVE_M16	Could not store activity. Another activity is active.
5004	ACT_ERROR_ACTIVE_PC	Could not store activity. Another activity is active.
5005	ACT_ERROR_ACTIVE_UNK	Could not store activity. Another activity is active.
5006	ACT_ERROR_ACTIVE_CE	Could not store activity. Another activity is active.
5007	ACT_ERROR_ACTIVE_LNE	Could not store activity. Another activity is active.
5010	AUTODEL_FIRMWARE	Automatic deletion triggered due to firmware update.
5011	AUTODEL_CONFIGURATION	Automatic deletion triggered due to configuration update.
5014	AUTODEL_ERROR	Automatic deletion failed.
5015	AUTODEL_WRITEERROR	Writing to logfile failed.
5016	AUTODEL_TIMEOUT	Communication response received after timeout.
5017	AUTODEL_UNKNOWN	Automatic deletion triggered due to an unknown update.
5018	AUTODEL_DELError	Deletion failed. Bootloader sent an unknown response.
5019	AUTODEL_EMPTYRESP	The bootloader sent an empty response.
5020	AUTODEL_RETRYFAIL	Retrying failed. (Retried operation three times)
5021	AUTODEL_NOTINIT	Deletion failed during initialization.



5022	AUTODEL_CLEARREQFAIL	Eventlogger clear request failed.
5023	AUTODEL_CLEARREQSTATE	Eventlogger clear request failed.
5024	AUTODEL_REQFAIL	Eventlogger clear request failed.
5025	AUTODEL_TIMEOUTSET	Timeout occurred.