

# ALCOLOCK™ GR

## ALCOHOL INTERLOCK



Troubleshooting guide



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# LOCKOUT DATES AND CODES

## RECALL CODES

### NOTE:

- *The Handset will indicate either Immediate recall or Early recall, and will display the associated code number. Refer to section 1.4 “Immediate and Early Recalls (Definition)”*
- *Not all recalls apply to your jurisdiction. Please contact your Program Service Coordinator to confirm which recalls apply.*

RECALL CODE	DESCRIPTION	POSSIBLE CAUSE
0	Failed Stopped Test	Failed a breath test before starting the vehicle engine.
1	Failed Running Test	Failed a breath test (retest) after starting the vehicle engine.
2	Tach Fault	An acceptable breath test was provided and the vehicle engine started, but the device did not detect a tach signal.  or  An acceptable breath test was provided and the vehicle ignition key was turned to the ON position without starting the engine
3	Sanction Failed Test	Failed a breath test (high breath-alcohol content).
4	Consecutive Failed Tests	Failed multiple breath tests in a row.
5	Missed Retest	Failure to comply to a retest request.
6	Retest Time-Lapse Fail	Failure to comply to a pull over request (after failing a breath test).
7	Start Violation	Vehicle engine started without providing an acceptable breath test (tampering).
8	Power disconnect (short)	Vehicle battery was disconnected multiple times over the set time limit.
9	Consecutive Hum Aborts	Multiple breath test aborts due to incorrect hum or a technical issue.
10	Log Full (90%)	Event log download required.
11	Emergency Override (no code)	Emergency override feature was activated.
12	Ignition Fault	Vehicle engine was running but the device did not detect an ignition signal.
13	Emergency Override (no code)	Emergency override feature was activated.

14	Power disconnect (long)	The vehicle battery was disconnected once over the set time limit.
15	TPM	Third Party Maintenance (TPM) feature was activated.
16	Key Violation	The ignition key was left in the ON position over the set time limit before providing an acceptable breath test.
17	Combined Failed Test	Failed a breath test (of any type).
18	Restricted Driving	The vehicle was operated during a preset restrictive driving period.
19	OBD2 Technical Error	OBDII communication error. Replace the OBDII assembly.
20	HS Technical Error	Handset fault. Replace the handset.
21	ECU Technical Error	ECU fault. Replace the ECU.
23	Multiple Timed Sanction BAC Fails	Several sanction fail tests were provided within a certain period of time.
24	Multiple Timed Standing BAC Fails	Several standing fail tests were provided within a certain period of time.
25	Combined Power Interrupt	Total number of short and long power interruptions exceeded the set limit.
26	Log Memory Almost Full 95%	Event log download required.
27	Failed Required Test	Failed a required breath test.
28	Missed Required Test Failure	Failure to comply to a required breath test.
29	Combined Violations	Combination of any 5 violations / occurrences.
30	Camera Error	Camera fault. Replace the camera.
31	Camera 80% full	Camera download required.
32	Wireless Upload Fault	Wireless upload failed to complete.
33	Standing Sanction BAC Fail	Failed a breath test (high breath-alcohol content) before starting the vehicle engine.
34	Retest Sanction BAC Fail	Failed a breath test (high breath-alcohol content) after starting the vehicle engine.
35	Failed Required Test	Failed a required breath test.
36	Missed Required Test	Failure to comply to a required breath test.
37	Failed / Failed Required Retest	Failed retest was followed by a failed required retest.
38	Missed / Failed Required Retest	Failure to comply to a retest was followed by a failed required retest.

39	Failed / Missed Required Retest	Failed retest was followed by a failure to comply to a required retest.
	or	or
	Missed / Missed Required Retest	Failure to comply to a retest was followed by a failure to comply to a required retest.

**NOTE: Some recall codes may not be activated for some jurisdictions.**

## HANDSET TECHNICAL ERROR CODES

**NOTE: The screen will specify that there has been a Handset Technical Error, and will display the associated code number.**

ERROR CODE	DESCRIPTION	RECALL OR LOCKOUT
1	Real Time Clock (RTC) (no access)	Recall
2	RTC (not ticking)	Recall
3	RTC (clock invalid)	Recall
4	No access to flash	Lockout
5	Radio Frequency (RF) chip failure	Lockout if wireless Recall if wired
6	CAN chip failure	Lockout if wireless Recall if wired
9	No access to battery gas gauge	Lockout
10	No access to Digital-To-Analog chip (for adjusting pressure baseline)	Lockout
11	Ambient thermistor pins open	Lockout
12	Ambient thermistor pins shorted	Lockout
13	Blow tube heater thermistor pins open	Lockout
14	Blow tube heater thermistor pins shorted	Lockout
15	Fuel cell heater thermistor pins open	Lockout
16	Fuel cell heater thermistor pins shorted	Lockout
17	Blow tube thermistor pins open (for anti-circumvention)	Lockout
18	Blow tube thermistor pins shorted (for anti-circumvention)	Lockout
19	Pump fire not OK (power-on self-test)	Lockout



20	Pump release not OK (power-on self-test)	Lockout
21	Pressure baseline not adjustable	Lockout
22	Pump charger not OK (the capacitor cannot be charged > 20V)	Lockout

**\*ECU technical recall. Refer to “Recall Codes”.**

## ECU TECHNICAL ERROR CODES

**NOTE: The screen will specify that there has been an ECU Technical Error, and will display the associated code number.**

ERROR CODE	DESCRIPTION	RECALL OR LOCKOUT
1	RTC (no access)	Recall*
2	RTC (not ticking)	Recall*
3	RTC (clock invalid)	Recall*
4	No access to flash	Lockout
5	RF chip failure	Lockout
6	CAN chip failure	Recall*
9	Starter relay (failure to latch)	Lockout
10	Starter relay (failure to unlatch) (may happen on latching relay)	Recall*
11	Siren relay (failure to latch)	Recall*
12	Siren relay (failure to unlatch)	Recall*
13	No communication with GPS module	Recall*
14	OBD II chip failure	Recall*

**\*ECU technical recall. Refer to “Recall Codes”.**

## IMMEDIATE AND EARLY RECALLS (DEFINITION)

Immediate or Early Recalls result from:

- Program violations
- ALCOLOCK GR system problems

When a recall occurs, the Handset will display **Immediate recall** or **Early recall**, along with the associated recall number (refer to Section 1.1, “Recall Codes”) and the final time and date before a Service Lockout occurs.

Example:

Early recall: 7 (Recall code)

2011-10-10 (Lockout date)

23:59 (Lockout time)

**NOTE:** *Contact your Program Service Manager to confirm Early/Immediate recall periods.*

## SERVICE LOCKOUT (DEFINITION)

If the ALCOLOCK GR device is not Powering On:

- Ensure that the Handset is fully charged
- Visually inspect the vehicle battery posts for corrosion or loose terminal connections
- With an automotive battery load tester, verify that the vehicle battery is around 12.66V (If the tester displays 10V or below, the vehicle battery needs to be replaced).

**NOTE:**

- *If the battery has been discharged more than twice, its integrity has decreased.*
- *Check all wiring connections between the ALCOLOCK GR system and the vehicle, including the ground connection.*

## EXCHANGE PROCEDURES

### HANDSET EXCHANGE PROCEDURE

1. Plug a new Handset into the Calibration/Download Station. Calibrate the Handset and complete a Handset Exchange transaction under the client’s name. Activate the Handset in the client’s vehicle.
2. Once the new Handset has been activated, the original Handset must be connected to the Calibration/Download Station so that a Handset Return transaction can be completed under the client’s name.

**NOTE:** *If the Handset Return transaction cannot be completed, send back the Handset to ACS. Label the returned Handset “DATA IN”.*

## ECU EXCHANGE PROCEDURE

1. With the original Handset in range or connected to the ECU (wired version), enter the daily service code, and select **Maintenance** in the **Service** menu.
2. Wait for Maintenance Completed to appear on the screen, and disconnect the Handset.
3. Plug the Handset into the Calibration/Download Station and complete an Interlock Maintenance transaction.
4. With a new ECU in a client's vehicle, perform an Install procedure, using either a new Handset or the original Handset.
5. Once an Install procedure is completed, plug the Handset back into the Calibration/Download Station, and complete an Interlock Exchange transaction.
6. Activate the Handset in the client's vehicle.

## TROUBLESHOOTING TABLES

For other messages or issues not listed in the tables below, contact your Program Service Coordinator.

### INVALID SAMPLE AND ABORT MESSAGES

The following messages may appear while attempting a breath test.

**NOTE: If the invalid sample or abort messages below continue, you may need a new Handset. In this case, perform a Handset exchange procedure and return the old Handset to ACS (refer to "Handset Exchange Procedure")**

MESSAGE DISPLAYED	DESCRIPTION	POSSIBLE CAUSE	SOLUTION
One of the following: <ul style="list-style-type: none"><li>• BLOW HARDER</li><li>• BLOW SOFTER</li><li>• BLOW LONGER</li><li>• BLOW THEN HUM</li><li>• HUM LOUDER</li></ul> AFTER BLOW	Insufficient breath sample	Incorrect blow configuration	Blow accordingly  Ensure mobile phone is off
INVALID SAMPLE 05	Thermal anti-circumvention failure	Handset and mouthpiece are at very different temperatures Possible circumvention	Wait a few minutes, with the mouthpiece still attached to the Handset  Take breath test again
INVALID SAMPLE 06	Sucking back	Possible circumvention	Take breath test again

Abort 15	Baseline rises	Too much mouth alcohol	Rinse your mouth and take breath test again
Abort 25	Analysis times out	Sensor requires replacement	Take breath test again
Abort 35	Sampling channel not ready	Abrupt temperature drop	Take breath test again
Abort 45	Pump fails to fire properly	Dirty pump Low Handset battery	Unplug Handset and shake to loosen piston inside pump  Charge Handset
Abort 50	Pump fails to release properly	Dirty pump Low Handset battery	Unplug Handset and shake to loosen piston inside pump  Charge Handset

## OTHER TROUBLESHOOTING

The following table highlights other issues related to the vehicle battery or Handset battery. Also, refer to section 2.0, “Vehicle Battery Malfunction”.

CONDITION/MESSAGE DISPLAYED	POSSIBLE CAUSE	SOLUTION
Handset display is blank with no LED flash	Handset battery is not charged	Charge Handset
Handset display is blank and the LED flashes	Handset is in sleep mode (this is a normal feature)	Activate the Handset by pressing centre, up and down on the navigation pad
Handset displays Start motor and the engine cranks but will not star	Possible problem with vehicle battery  Refer to section 2.0, “Vehicle “Battery Malfunction”	Boost or charge vehicle battery. If unsuccessful, ask the client to visit a mechanic
Stuck in Wait screen	Handset battery is weak	Charge Handset

# HANDSET LED ACTIVATION

The following table lists LED activation and colour type based on the Handset state.

HANDSET STATE	LED COLOUR
Wait	Flashing ORANGE
Blow for 4 seconds	Solid GREEN
Blowing	OFF
Wait... (Sampling)	OFF
Abort	Flashing RED
Turn key off	Flashing RED
Key violation	Flashing RED
Start violation	Flashing RED
Start motor	Flashing GREEN
Start motor (Caution)	Flashing ORANGE
Caution	Flashing ORANGE
Timed lockout	Solid RED
Drive safely	Solid GREEN
Warm up	Solid GREEN
Standby	Solid GREEN
Drive safely (Caution)	Solid ORANGE
Warm up (Caution)	Solid ORANGE
Standby (Caution)	Solid ORANGE
Stall protect	Flashing GREEN
Retest	Flashing GREEN
Retest (Wait)	Flashing ORANGE
Missed retest	Flashing GREEN
Failed retest	Flashing RED
Battery low	Flashing RED
Emergency override	Solid GREEN
Dealer service	Solid GREEN
Fault lockout	Flashing RED
Service due	Solid ORANGE
Service lockout	Solid RED
Calibration lockout	Solid RED





