

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. |

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|----|-----------------------------------|--|
| 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">• BLOW HARDER• BLOW SOFTER• BLOW LONGER• BLOW THEN HUM• HUM LOUDER 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 |





