# **S-DRIVE CONTROLLER DIAGNOSTIC BLEEP CODES**

1	*	Not Used
2	**	Low Battery Voltage
3	***	High Battery Voltage
4	****	Not Used
5	****	Solenoid Brake Trip
		(free-wheel)
6	*****	Throttle/speed pot Trip
7	*****	Throttle/speed pot Trip
8	*****	Motor Disconnected
9	******	Possible Controller Trip

## **S Drive Controller Trip Codes**

Trip Code	Description
0300	Throttle pot fault
0815	Throttle pot fault
0A00	Sleep Mode
0E07	Throttle pot fault
0E08	Throttle pot fault
1500	Solenoid brake trip
1502	Solenoid brake trip
1600	High battery voltage
1601	High battery voltage
1E08	Inhibit active
1E09	Inhibit active
1E0A	Inhibit active
2C00	Low battery voltage
2F01	Throttle displaced at power up
3B01	Motor disconnected
3D02	Motor wiring trip
3D03	Motor wiring trip
7000	Freewheel mode engaged
7001	Freewheel mode engaged
All Others	Possible controller trip

## 0300, 0810, 0814, 0815, 0816, 0817, 1D02, 0E07, 0E08

#### Throttle Trip

This occurs when the controller detects a fault in the throttle or the connections to it. Check the connections and the Throttle.

If the trip is still present after the above checks have been made, then the controller may be defective.

There are no serviceable parts in any of the PG Drives Technology controller. Consequently, any defective units must be returned to PG Drives Technology or a PG Drives Technology approved service organization for repair.

Opening or making any unauthorized adjustments or modifications to a control system or its components will invalidate any warranty and may result in hazards to the vehicle user, and is strictly forbidden.

#### WARNING

PG Drives Technology accept no liability for losses of any kind arising from unauthorized opening, adjustments or modifications to a any component of a controller.

#### EGIS

0814 - Throttle High Reference disconnected (pin 12)

0815 - Throttle Potentiometer High or Low Ref. disconnected.

0816 - Short Circuit between Throttle Wiper and Throttle High Reference. (pins 7 & 12)

0817 - Short Circuit between Throttle Wiper and Throttle Low Reference. (pins 7 & 5)

#### S-DRIVE

0300 - Speed Limit Potentiometer wiper open. (Non-Trip, allows limited Drive Speed)

0815 - Throttle Potentiometer High or Low Ref. disconnected.

0E07 - Wiper shorted to either Ref. (Only applicable if an ISO-Test Resistor is fitted)

0E08 - Open circuit Throttle Potentiometer Wiper.

0A00

Control System in Sleep Mode

Scooter Controllers

This condition is indicated by the Status Indicator "blinking on" once every 2.5 seconds. It is not a trip condition, but an indication that the controller has gone to sleep. To awake the system, switch off and on again.

The controller goes to sleep after a programmed period of time. If you want to adjust this time or remove the function altogether go to the Operation group.

## 1500, 1501, 1502, 1504, 1505, 1506

Solenoid Brake Trip

This occurs when the control system detects a fault in the solenoid brakes or the connections to them. Check these connections and the solenoid brakes.

If the trip is still present after the above checks have been made, then the controller may be defective.

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#### EGIS

1500 -	Open Circuit in Solenoid Brake Circuit.
1501 -	Short Circuit in Solenoid Brake Circuit.
1502 -	Over-current Solenoid Brake Circuit.

#### S-DRIVE

- 1500 Short Circuit in Solenoid Brake Circuit.
- 1502 Open Circuit in Solenoid Brake Circuit.

## 1600, 1601

#### High Battery Voltage

This occurs when the control system detects that the battery voltage has risen above 35V. The most common reasons for this are overcharging of the battery or bad connections between the control system and the batteries. Check the batteries and the connections to them.

If the trip is still present after the batteries and connections have been checked, then the control system may be defective.

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1E03, 1E08

Off-board Charger Connected – Inhibit 2 Active

Please refer to the specific details for the controller currently connected.

#### S-DRIVE

This occurs when an off-board battery charger is connected to the charging socket, and is indicated by the TruCharge battery gauge "stepping up." Check that the battery charger is disconnected.

If the trip is still present after the charger has been disconnected then the controller may be defective.

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#### 1E04, 1E09

Inhibit 2 Active

#### S-DRIVE

This occurs when the S-Drive's Inhibit 2 input is active. The Inhibit 2 input is via the Tiller connector and is normally associated with actuator functions. The operation of Inhibit 2 will depend upon the programmed settings of the S-Drive and the scooter on which it is being used.

Check all wiring and switches connected to Inhibit 2. If these appear to be in working order, then the controller may be defective.

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## 1E05, 1E0A

Inhibit 3 (On-board Charger) Active

Please refer to the specific details for the controller currently connected.

#### S-DRIVE

This occurs when the S-Drive's Inhibit 3 input is active. The Inhibit 3 input is via the Tiller Connector and is normally associated with the On-board Charger function. The operation of Inhibit 3 will depend upon the programmed settings of the controller and the scooter on which it is being used.

Check all wiring, switches and OBC (if fitted) connected to Inhibit 3. If these appear to be in working order, then the controller may be defective.

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#### 2C00

Low Battery Voltage

#### S-DRIVE

This occurs when the controller detects that the battery voltage has fallen below 16V. Check the condition of the batteries and the connections to the controller.

If the trip is still present after the batteries and connections have been checked, then the controller may be defective.

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## 2F01

#### Throttle Displaced at Power-up

The most common cause of this trip is if the Throttle is deflected away from centre before the controller is switched on. When the controller is switched on, the Status Indicator will blink for a short time. Check that the user is not deflecting the throttle before the blink finishes.

If the problem persists try manual adjustment of the Throttle Potentiometer to reset the Dead-band area. Try replacing the throttle completely.

If the trip still persists then the controller must be assumed to be defective.

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## 3B01

Motor Disconnected

This occurs when the controller detects that the motor has become disconnected. Check the motor, motor connectors and wiring.

If the trip is still present after the above checks have been made, then the controller may be defective.

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Technology or a PG Drives Technology approved service organization for repair.

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### 3D02, 3D03

Motor Wiring Trip

This occurs when the controler detects a fault in the wiring to the motor, in particular if a motor connection has "short-circuited" to a battery connection. Check the motor connectors and wiring.

If the trip is still present after the above checks have been made, then the controller may be defective.

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## 7000, 7001

Freewheel Mode Engaged

This occurs if the freewheel switch is operated whilst the vehicle is driving, or if the freewheel switch is already operated when the vehicle is switched on. Check the position of the freewheel switch.

If the freewheel switch is in the correct position, check the cables and connections.

## All Other Trip Codes

This could indicate a problem internal to the control system itself and it may need to be returned to PG Drives Technology. However, intermittent problems associated with the vehicle could cause these Trip codes to be displayed, e.g. poor battery connections.

Prior to returning the control system check that all connections to Motors, Brakes, Battery and the Control System are sound.

For further advice on possible intermittent vehicle generated trips please contact the vehicle manufacturer or PGDT.

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