

# Fix ESC Status Error on Ph3 Pro Ph3 Adv or Ph3 Std

quaddamage · Jul 2, 2018 · board component esc fix pcb solder

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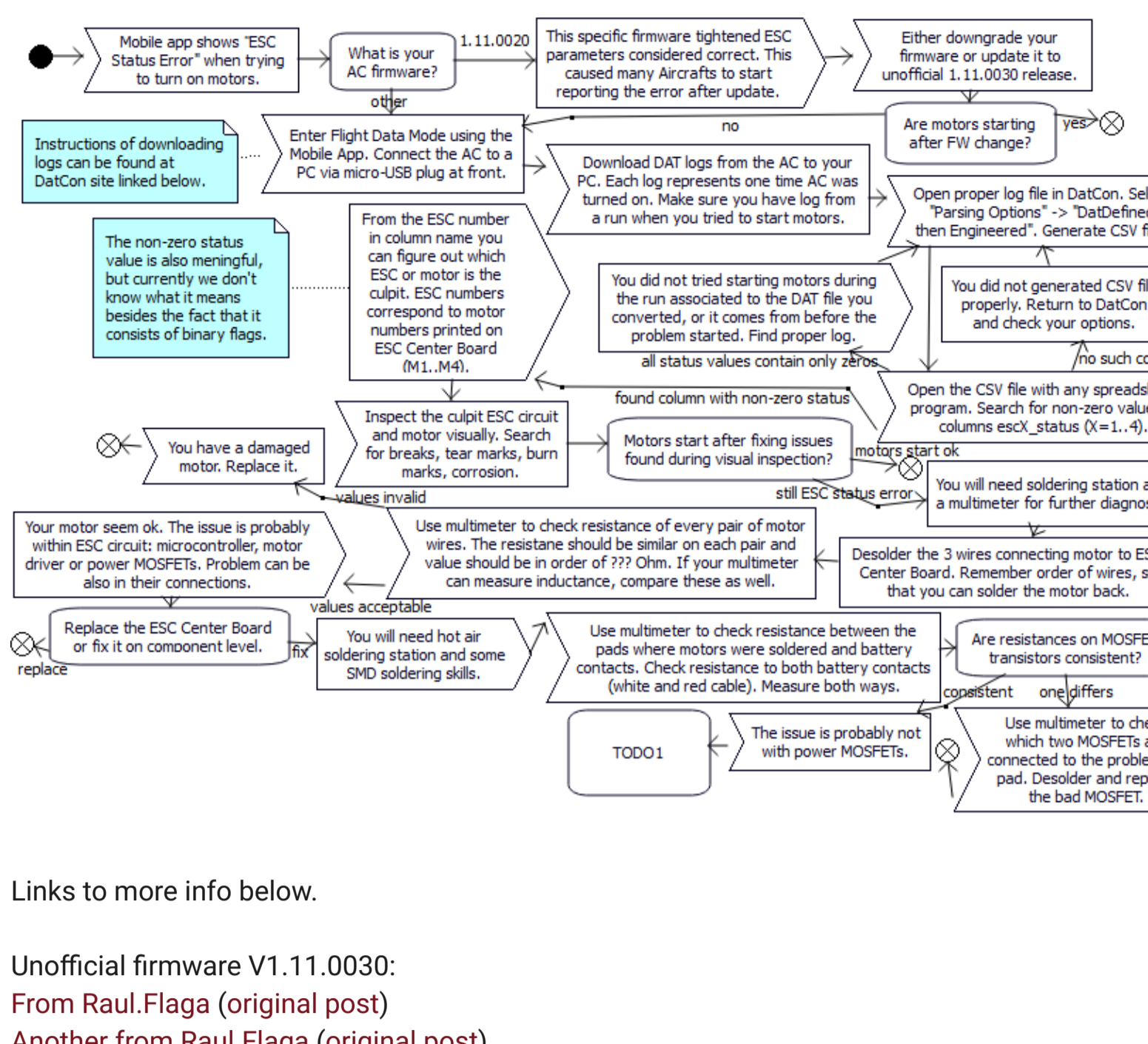
Watch

Jul 2, 2018

Follow the steps to fix ESC Status Error on Phantom 3 aircraft. This will let you repair the drone by either replacing the damaged component or fix it on component level.

Currently the diagram matches all: Ph3 Standard, Ph3 Professional and Ph3 Advanced.

The diagram is oriented towards users who do not have a second drone to interchange parts, or advanced equipment. The use of such items is delayed in the graph as much as possible, though it is unavoidable at some point.



Links to more info below.

Unofficial firmware V1.11.0030:  
 From Raul.Flaga (original post)  
 Another from Raul.Flaga (original post)

DatCon thread:  
 DatCon and CsvView work for P4 .DAT files

DAT Logs download instructions:  
 How to retrieve a .DAT

Board descriptions, useful for component level repairs:  
 o-gs/dji-firmware-tools

Last edited: Sep 1, 2018

Mark The Droner, szupek, BudWalker and 1 other person

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Oct 10, 2018

Naah. I'll just trash or sell mine and will buy something less buggy. Thanks anyway for trying to help!

Dji\_Hki

Joined: Oct 10, 2018  
 Messages: 2  
 Reaction score: 0

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Jan 11, 2020

Oh, @quaddamage, another magnificent content from you 😊 I wish I found it earlier.

I have a one ESC board (p3 pro), where upon start, I get "motor obstruction" message. I switched motors, and working one was causing the same result, so, board is most likely to be blamed for. I analyzed the log, and all ESC's statuses are equal 0. To my understanding of how ESC work, it is transition sensing (third phase/unpowered wire) that fails. I guess that it is BLDC driver (DRV8301) that is handling this. I have another board as a donor, unfortunately it is V1 version, and problematic one is v2. Do you know if drivers are interchangeable? On both boards I can see drv8301, however detailed numbers are different. Where is the difference between V1 and V2? Is it uController of each ESC?

Cheers

szupek

Joined: Jun 16, 2018  
 Messages: 78  
 Reaction score: 10  
 Age: 34

Last edited: Jan 11, 2020

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Jan 13, 2020

szupek said: 🗨️

Do you know if drivers [in V1 and V2 board] are interchangeable? On both boards I can see drv8301, however detailed numbers are different. Where is the difference between V1 and V2? Is it uController of each ESC?

Sorry, I don't really know. I only noticed the boards have one different buck converter, and some diodes. Never looked at ESC difference.

Though I doubt BLDC drivers are different. I'd expect difference to be only in software of the micro-controller.

Report Like Reply

Jan 13, 2020

Yeah, I also doubt they are, however these drivers are programmable, you can set several parameters using SPI. I am afraid the difference is here, however it might be that parameters (if any) are being set by uC on quad startup. I will try to resolder the driver and see if it brings a remedy to my motor obstruction problem.

szupek

Joined: Jun 16, 2018  
 Messages: 78  
 Reaction score: 10  
 Age: 34

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Jan 14, 2020

Ok, so I resoldered the driver DRV8301 (there is a center thermalpad/ground which complicates soldering procedure a bit) and it was not the case. Further mainboard inspection revealed missing capacitor in a phase sensing circuit. It is to be connected between 7th leg of ESC2000 uC (if I am not mistaken) and ground. In the schematics it is 100nF, however it turns out to be 22nF. After soldering it, everything works like a charm 😊

So my contribution to ESC problems would be, that if in spite of a good/functional motor, you are getting "Motor obstructed" error and ESC has status 0, please inspect sensing circuits.

AshrafRogers, quaddamage and Mark The Droner

szupek

Joined: Jun 16, 2018  
 Messages: 78  
 Reaction score: 10  
 Age: 34

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KachemakDiver

Messages: 792  
 Reaction score: 564

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New LANNC authorization required for each battery change? Started by Phil Crossley · Today at 5:33 AM · Replies: 2 Surveying and Mapping

Phantom 2 vision plus black screen Started by downedmaverick · Yesterday at 8:27 PM · Replies: 0 Phantom 2 Help

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