

# Installation and user guide for Sony Mobile Battery test.

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## Description

New version 1.49.0 **Sony Mobile Battery test** application is prepared for:

### Xperia

<b>Sola</b>	MT27i							
<b>P</b>	LT22i							
<b>Go</b>	ST27i	ST27a						
<b>Acro S</b>	LT26w							
<b>S</b>	LT26i							
<b>SL</b>	LT26ii							
<b>Ion</b>	LT28at	LT28h	LT28i					
<b>TX</b>	LT29i							
<b>GX</b>	SO-04D							
<b>T</b>	LP30p							
<b>TL</b>	LT30a	LT30at						
<b>V</b>	LT25c	LT25i						
<b>VL</b>	SOL21							
<b>AX</b>	SO-01E							
<b>Z</b>	C6602	C6603	C6606	C6616	L36h	SO-02E		
<b>ZL</b>	C6502	C6503	C6506		L35h			
<b>Tablet Z</b>	SGP311	SGP312	SGP321	SGP341	SGP351	SO-03E		
<b>SP</b>	C5302	C5303	C5306	M35c	M35h			
<b>Z Ultra</b>	C6802	C6806	C6833	C6843	SGP412	SOL24	XL39h	
<b>Z1f</b>	SO-02F							
<b>Z1 Compact</b>	D5503	M51w						
<b>Z1</b>	C6902	C6903	C6906	C6943	L39h	SO-01F	SOL23	
<b>Z1</b>	C6916	L39t	L39u					
<b>C</b>	C2304	C2305	S39h					
<b>T2 Ultra</b>	D5303	D5306	D5316	D5322	XM50h	XM50t		
<b>Z2</b>	D6502	D6503	D6543	D6708	L50t	L50u	L50w	SO-03F
<b>Z2 Tablet</b>	SGP511	SGP512	SGP521	SGP541	SGP551	SGP561		
<b>M2</b>	D2302	D2303	D2305	D2306	S50h			
<b>Z2a</b>	D6563							
<b>T3</b>	D5102	D5103	D5106	M50w				
<b>C3</b>	D2502	D2533	S55t	S55u				
<b>M3 Aqua</b>	D2403	D2406						

<b>E3</b>	D2202	D2203	D2206	D2212	D2243			
<b>Z3</b>	D6603	D6616/46	D6633	D6643	D6653	D6683	L55t	L55u
<b>Z3 Compact</b>	D5803	D5833	M55w					
<b>E4</b>	E2104	E2105	E2115	E2124				
<b>E4g</b>	E2003	E2006	E2033	E2043	E2053			
<b>M4 Aqua</b>	E2303	E2306	E2312	E2333	E2353	E2363		
<b>Z4 Tablet</b>	SGP712	SGP771						
<b>Z3+</b>	E6533	E6553						
<b>C4</b>	E5303	E5306	E5333	E5343	E5353	E5363		
<b>Z4v</b>	E6508							
<b>C5 Ultra</b>	E5506	E5533	E5553	E5563				
<b>M5</b>	E5603	E5606	E5633	E5643	E5653	E5663		
<b>Z5 Compact</b>	E5803	E5823						
<b>Z5</b>	E6603	E6633	E6653	E6683				
<b>Z5 Premium</b>	E6833	E6853	E6883					
<b>XA</b>	F3111	F3112	F3113	F3115	F3116			
<b>E5</b>	F3311	F3313						
<b>XA Ultra</b>	F3211	F3212	F3213	F3215	F3216			

More products will follow.

This test is designed to identify a faulty battery or a hardware issue in the phone or with the charger. The guide will describe different procedures depending on the battery level when the battery test is initiated.

The following equipment is needed to do the installation and perform the test:

- Computer and EC480 or EC801 cable to transfer the application to the phone
- An **EP800** charger and **EC480 or EC801** cable is regarded as reference equipment when trouble shooting the charger system if the users charger/cable has been returned together with the phone and battery
- SD card to install the application if no internally memory is available.(other models)

Revision	Description	Date
1	First release	12-05-20
2	Products added. Installation new Android SW (ICS) added.	12-08-31
3	Name change to Sony Mobile Battery test .Products added.	12-09-14
4	Products added.	12-11-10
5	Products added	13-02-04
6	Products added	13.02.17
7	Xperia Tablet Z (SO-03E) added	13.03.06
8	Xperia Tablet Z (SGP311, SGP312, SGP321, SGP341, SGP351) added Xperia Z (C6606) added	13.03.27
9	Xperia SP (c5302, C5303, C5306, M35c, M35h) added	13.04.13
10	Xperia Z (C6616) and Xperia Z Ultra (C6802, XL39h) added	13.07.23
11	Xperia C (C2305, S39h) added	13.07.29
12	Xperia Z Ultra (C6806,C6833) added Xperia Z1 (C6902, C6903, C6906, SO-01F, SOL23) added	13.09.06
13	Xperia Z1 (C6943) and Xperia Z Ultra (C6843) added	13.11.03
14	Xperia Z1 (L39) and Xperia Z1f (SO-02F) added	13.11.03
15	1.4 updated. Allow USB debugging in new Android version 4.3. L39u and C6916 added	13.12.25
16	Xperia Z Ultra (SGP412, SOL24) added and Xperia C (C2304) added	14.01.15
17	Xperia Z1 Compact (D5503) added.	14.01.24
18	Xperia T2 Ultra (D5322, XM50h) and Xperia Z1 Compact (M51h) added	14.03.09
19	Xperia T2 Ultra (XM50t), Xperia Z2 (D6502, D6503, D6543, L50w) and Xperia Tablet Z1 (SGP511, SGP512, SGP521, SGP541, SGP551) added	14.03.19
20	Xperia Z2 (L50t) added	14.04.15
21	Xperia M2 (D2302, D2303, D2305, D2306 and S50h) added	14.04.18
22	Xperia Z2 (L50u and SO-03F) added	14.04.27
23	Xperia T2 Ultra (D5306) added.	14.06.01
24	Xperia Z2a (D6563), Xperia T3 (D5102, D5103, D5106, M50w) added	14.07.04
25	Xperia T2 Ultra (D5316 ,D53016n) and Tablet Z1 (SGP561) added	14.07.25
26	Xperia C3 (D2502, D2533, S55t and S55u) added	14.07.29
27	Xperia M3 Aqua (2403 and D2406) added	14.08.20
28	Xperia E3 (D2202 and D2212) added	14.09.18

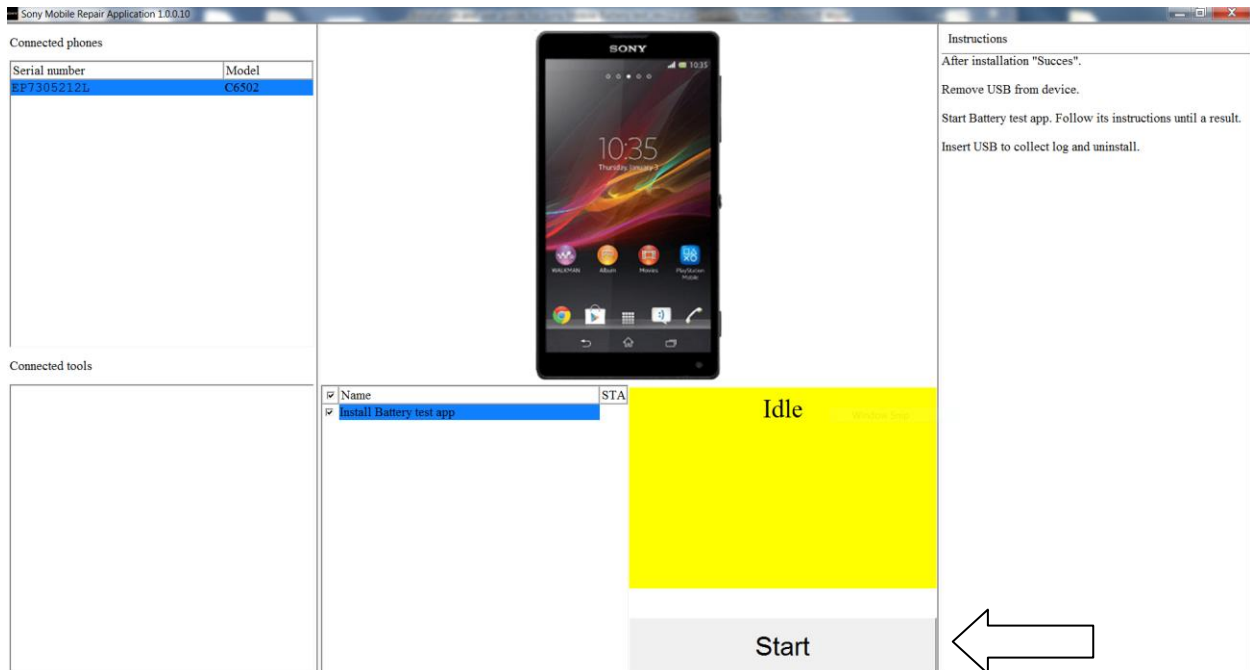
29	Xperia Z3 (D6603, D6633, D6653, L55t, L55u) and Xperia Compact (D5803, D5833,M55w) added	14.09.26
30	Xperia E3 (D2203, D2206 and D2243) added	14.09.27
31	Xperia Z2 (D6708) and Xperia Z3 (D6616,D6643) added	14.10.10
32	Internal resistance test will be performed if battery level can't meet test limits. Sony Mobile Battery test installation and logs readings, moved to Sony Mobile Repair application.	15.01.13
33	Xperia E4 (E2104, E2105, E2115 and E2124) added	15.02.20
34	Xperia E4g (E2003, E2006, E2033, E2043 and E2053) added	15.03.25
35	Xperia Z3 (D6683) added.	15.04.26
36	Xperia M4 Aqua (E2303, E2306, E2312, E2333, E2053 and E2063) added	15.05.18
37	Xperia Z4 Tablet (SGP712 and SGP771) added	15.05.22
38	Xperia Z3+ (E6533 and E6553) added	15.05.28
39	Xperia C4 (E5303, E5306, E5333,E5343, E5353 and E5363) added	15.06.09
40	Xperia Z4v (E6508) added	15.06.29
41	Xperia C5 Ultra (E5506, E5533, E5553 and E5563) added	15.08.15
42	Xperia M5 (E5603, E5606, E5633,E5643, E5653 and E5663) added	15.09.03
43	Xperia Z3 (D6646) , Xperia Z5 Compact (E5803, E5823) and Xperia Z5 (E6603,E6633,E6653) added	15.09.24
44	Xperia Z5 Premium (E6833,E6853,E6883) added	15.10.27
45	Xperia Z1 Compact (D5503) temperature curve adjusted	15.12.20
46	Xperia XA (F3111, F3112, F3113, F3115 and F3116) added	16.06.10
47	Xperia E5 (F3311 and F3313) added. Xperia XA adjusted to fit battery 1298-9239 and 1292-9240	16.06.14
48	Xperia XA Ultra (F3211, F3212, F3213, F3215 and F3216) added Xperia M5 (E5603, E5606, E5633, E5643, E5653 and E5663) adjusted.	16.06.18
49	Xperia E5 (F3311 and F3313) adjusted to fit battery 1298-9239 and 1292-9240 Low voltage limit adjusted for Xperia XA, Xperia XA Ultra and Xperia E5 Added Voltage level is products unique in Content 3,4 and 5	16.09.29

## Content

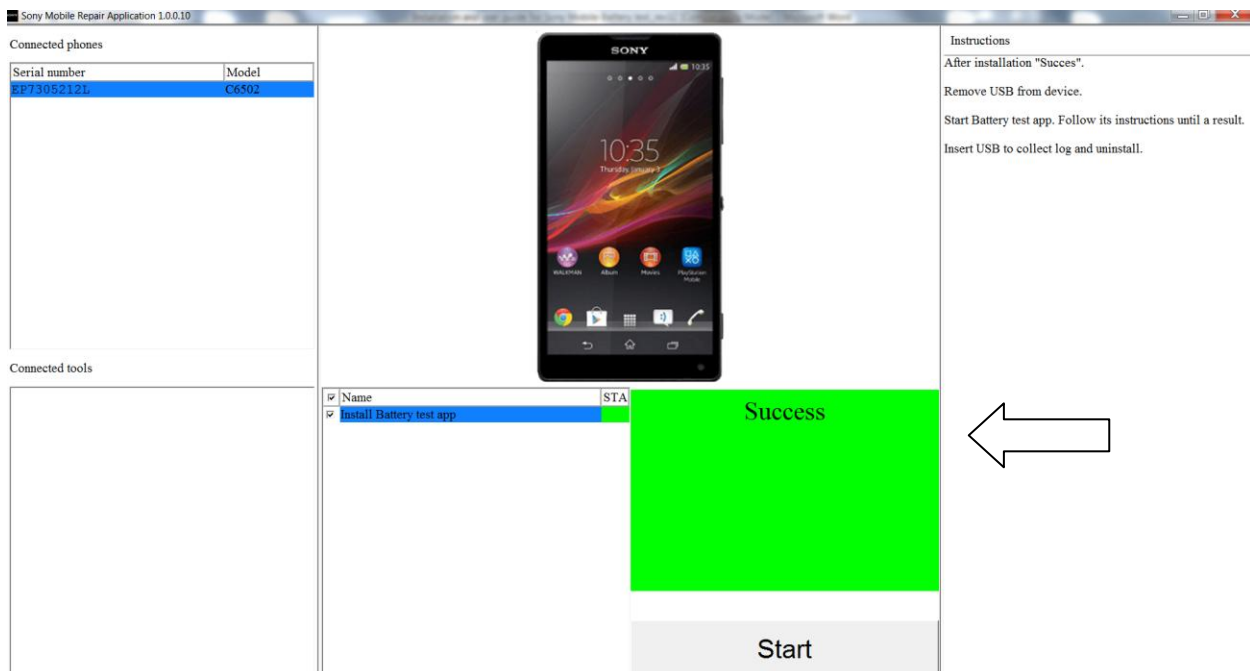
1. Installation .....	6
1.1 Before test.....	7
2. Start the application.....	9
3. Battery Test (battery level between 3,680-4,000 V) .....	10
3.1 AC Charger Test.....	10
3.2 Capacity Test .....	12
3.3 Internal Resistance Test .....	13
3.4 Test complete .....	13
3.5 Uninstall and collect log.....	14
4. Battery Test (battery level above 4,000 V) .....	15
5. Battery Test (battery level below 3,680 V) .....	17
6. Error Messages.....	19
6.1 Temperature outside limit 15-40C.....	19
6.2 Charger problem .....	20
6.3 Reduced Capacity.....	20
6.4 High Internal resistance .....	21
6.5 Check battery Connector .....	21
6.6 Could not charge to test limits.....	22
6.7 Unplugged too fast.....	23
6.8 You did not unplug in time.....	24
6.9 Unsupported Model.....	25
6.10 Temperature has been outside the limits during the test.....	26

# 1. Installation

Connect Android device to Sony Mobile Repair Application.  
Press Start button.



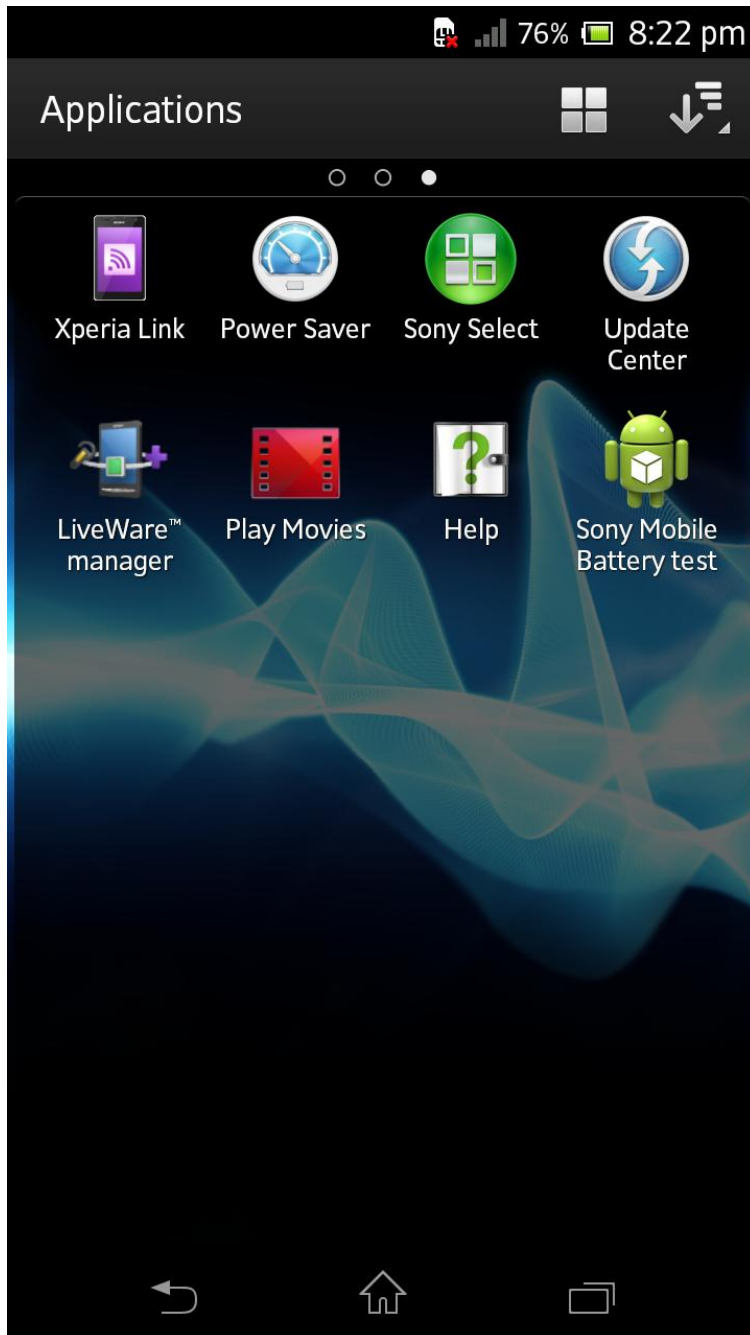
If Success, disconnect unit.



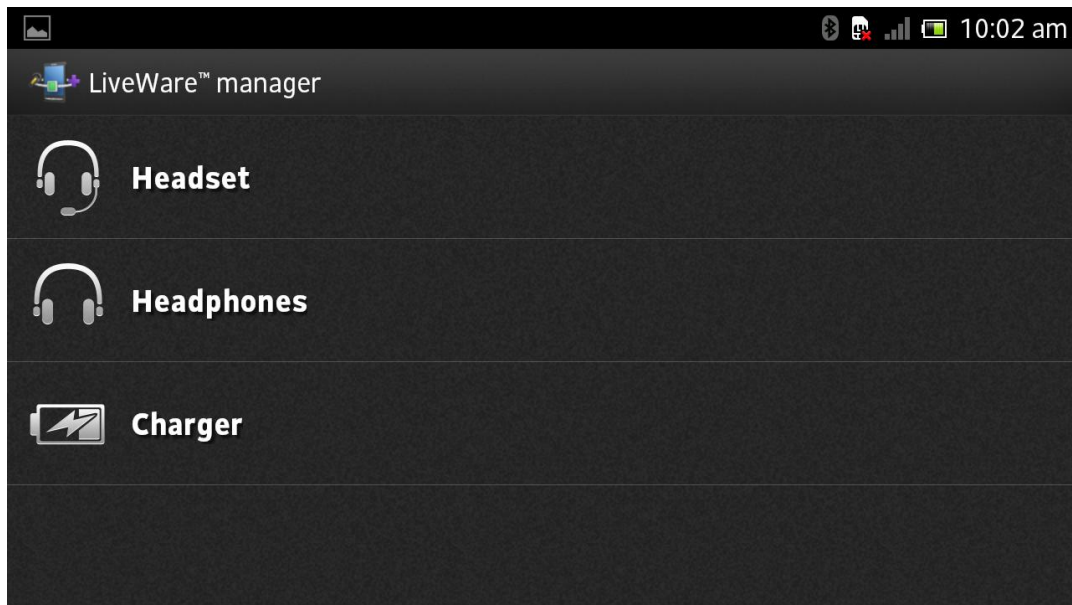
## 1.1 Before test.

Disable any programs that can popup when charger are inserted or removed.

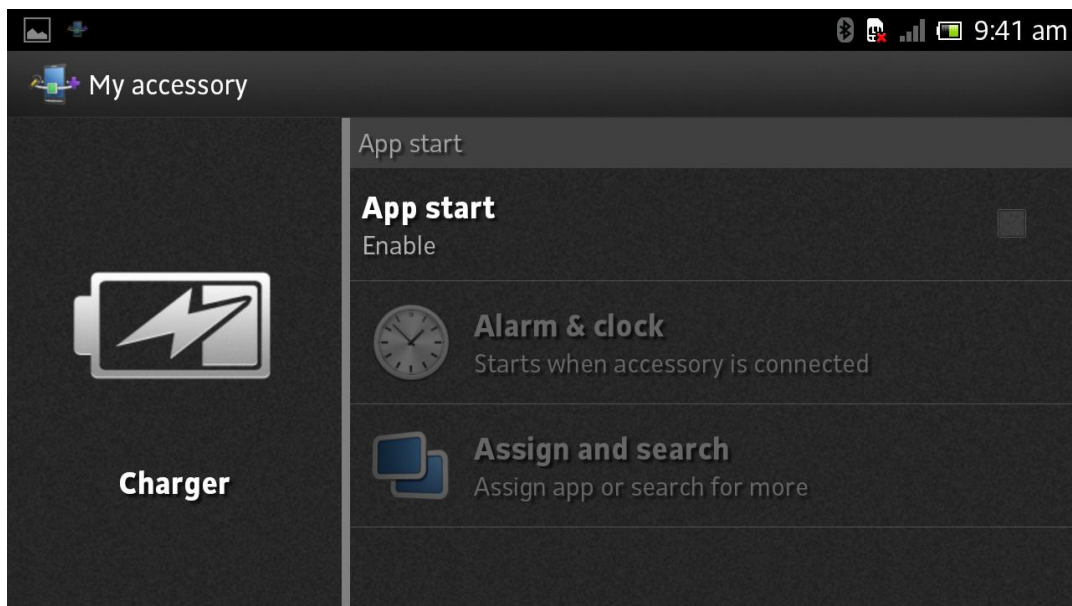
In Gingerbread press LiveWare manager icon to start the program.



Select Charger.



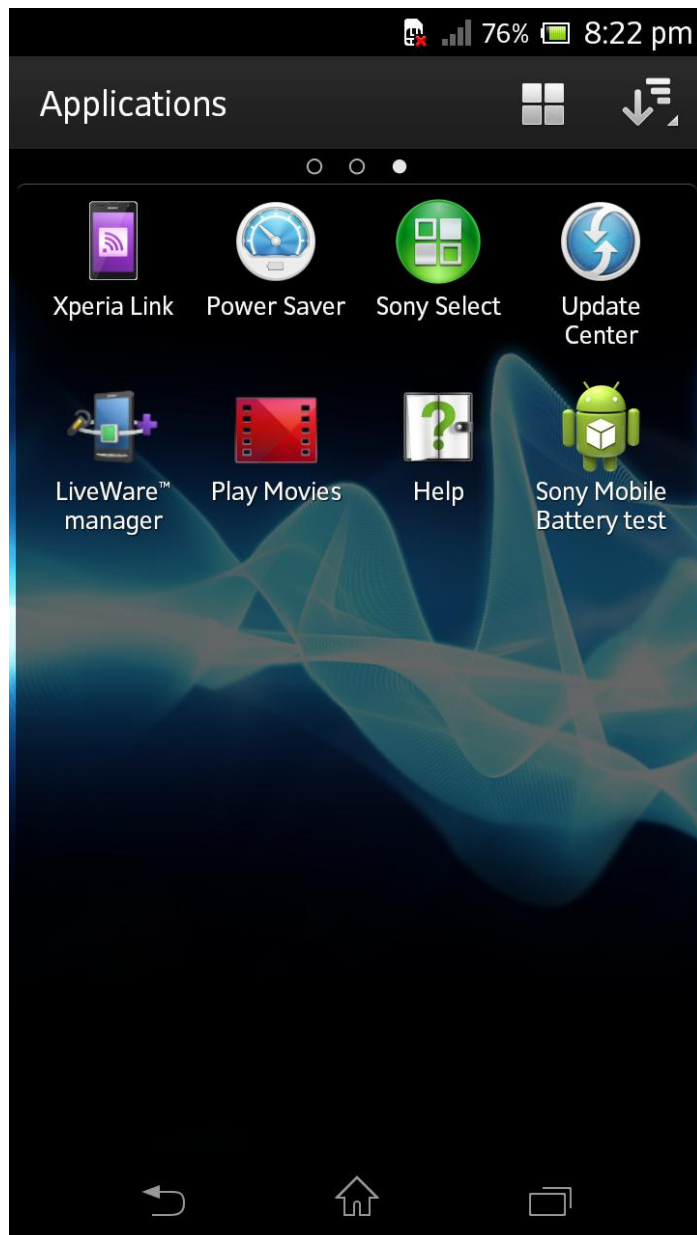
Checks that App start is disenable.





## 2. Start the application.

To start the application press Sony Mobile Battery test icon.



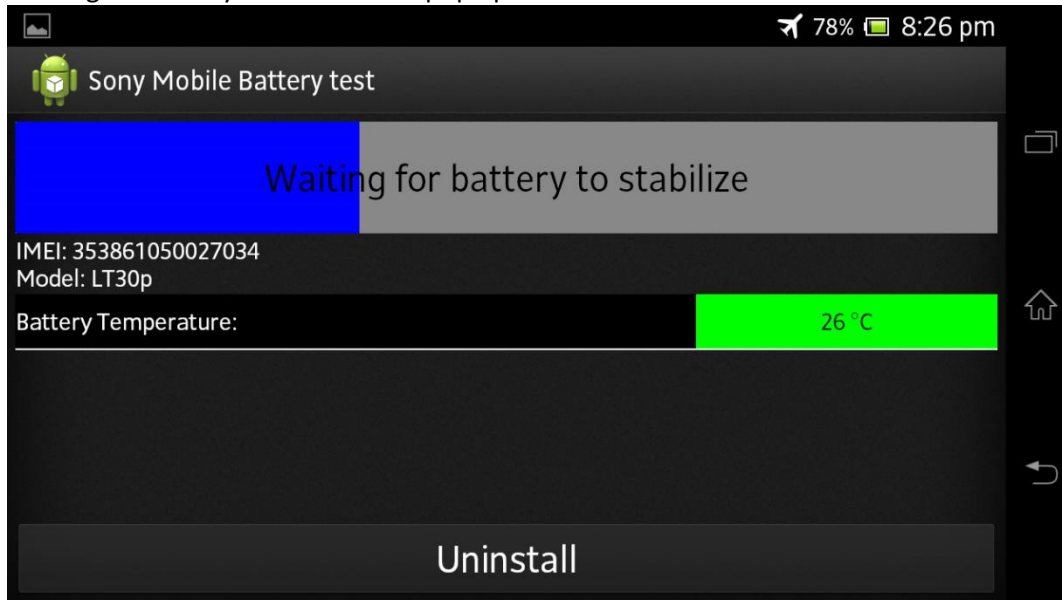
### 3. Battery Test (battery level between 3,680-4,000 V)

**Note: Voltage level is products unique.**

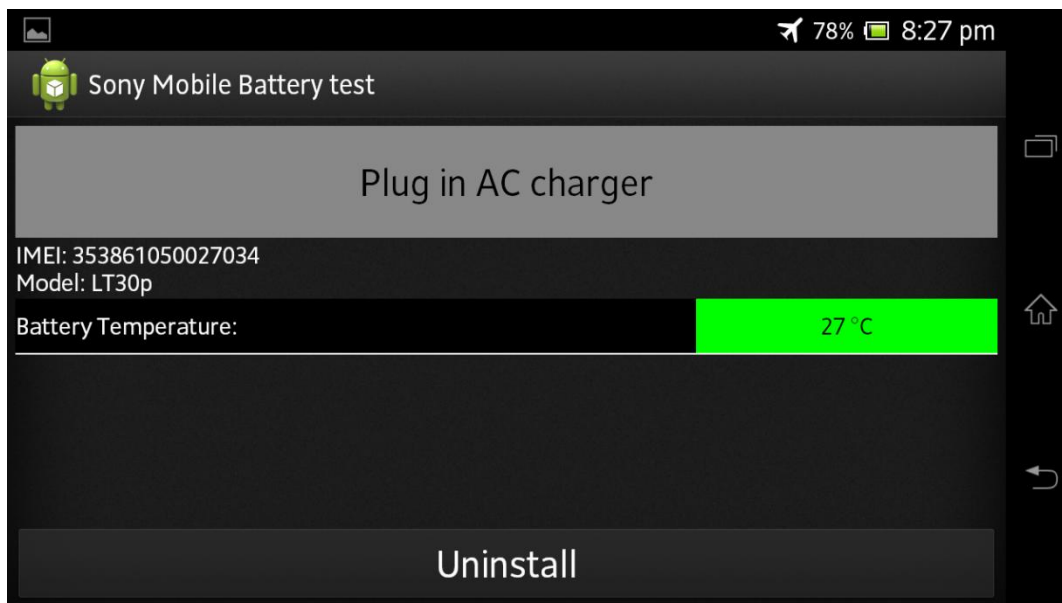
#### 3.1 AC Charger Test

If battery level is between 3,680 - 4,000 Volt and battery temperature is between 15 - 40 C, the test will be performed according to below described procedure. Total testing time will be approximately 3 min 20sec.

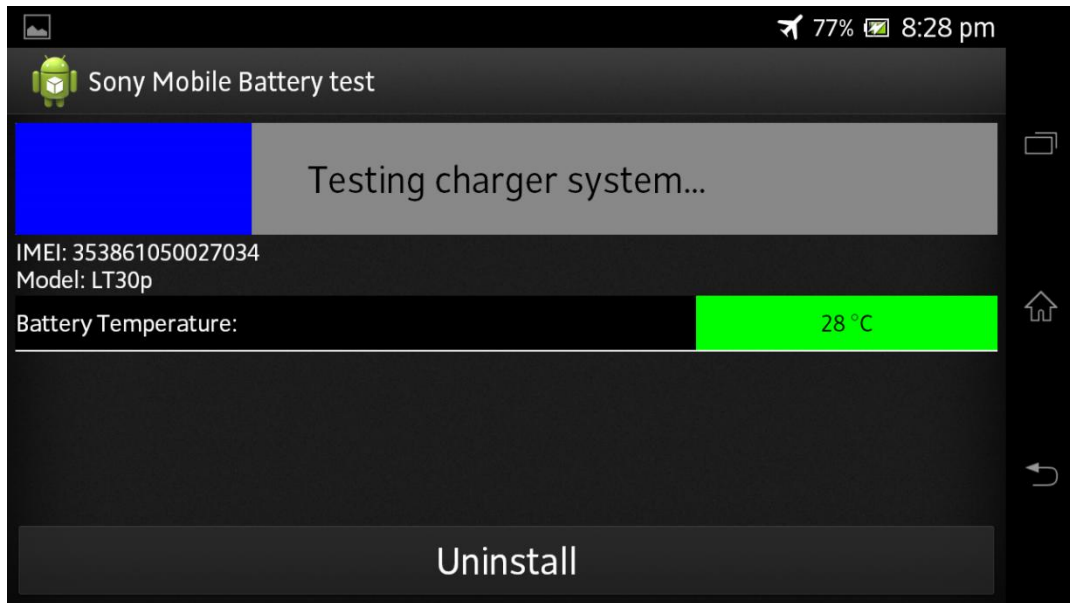
Waiting for battery to stabilize will pop up.



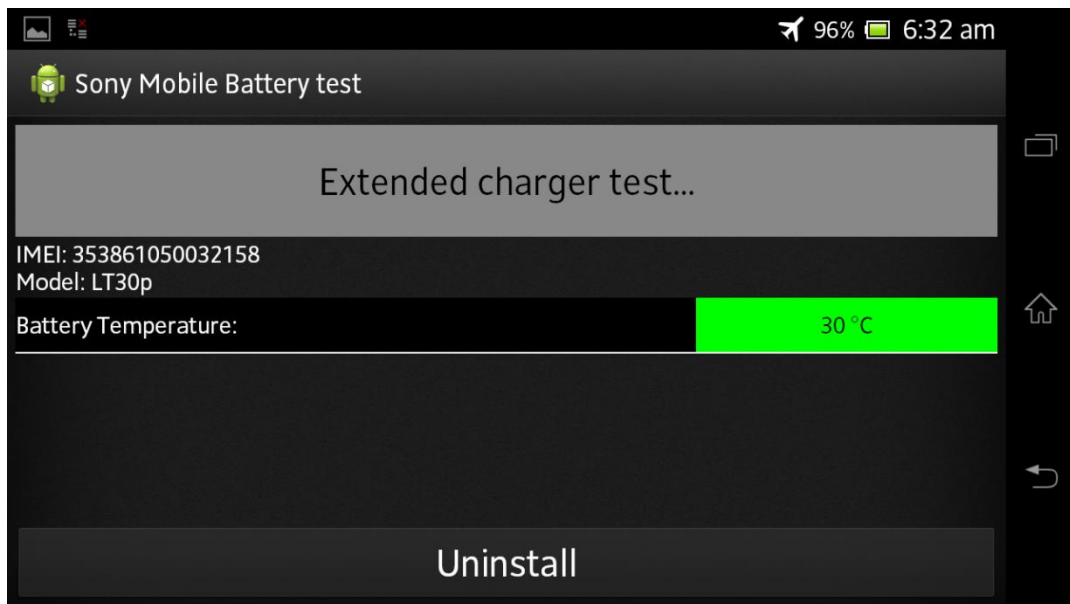
Insert AC charger, when "Plug in AC charger" pop up to test the charging system.



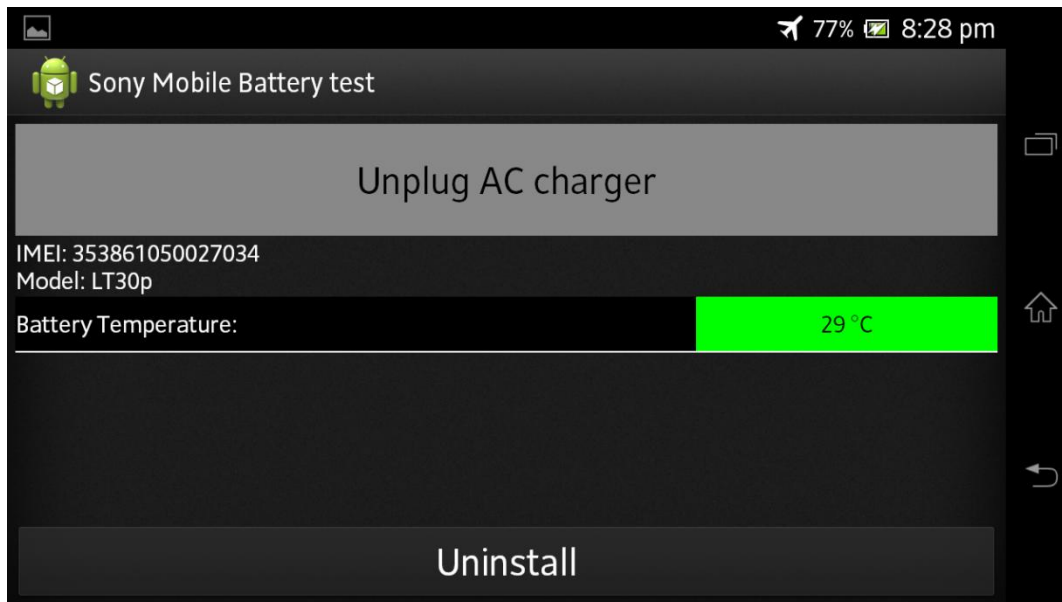
Wait: testing charger system.



Extended charger test can popup if charging test needs more data.

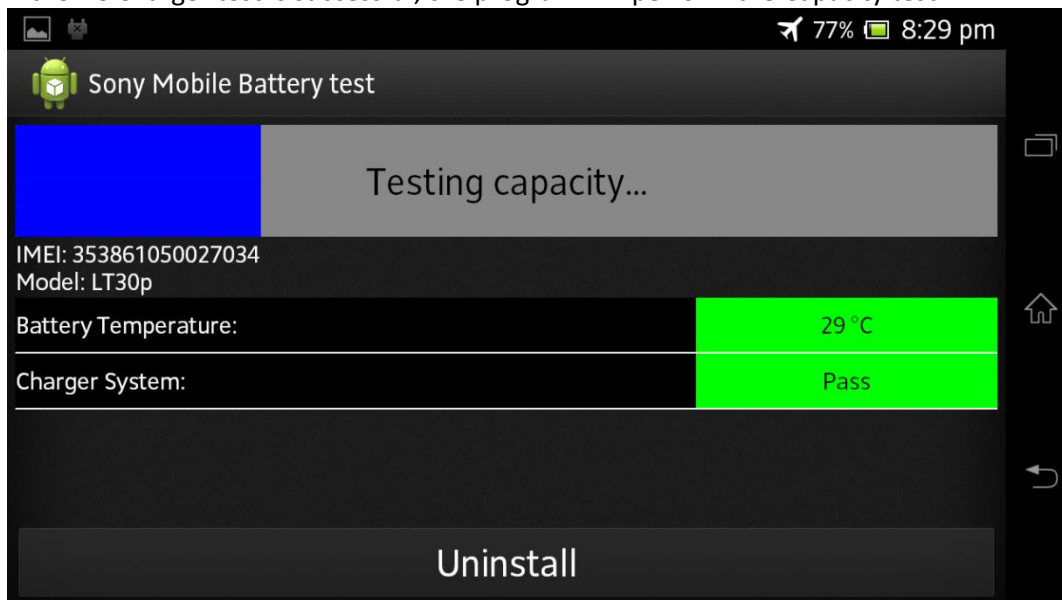


Unplug AC charger, when “Unplug AC charger” pops up.



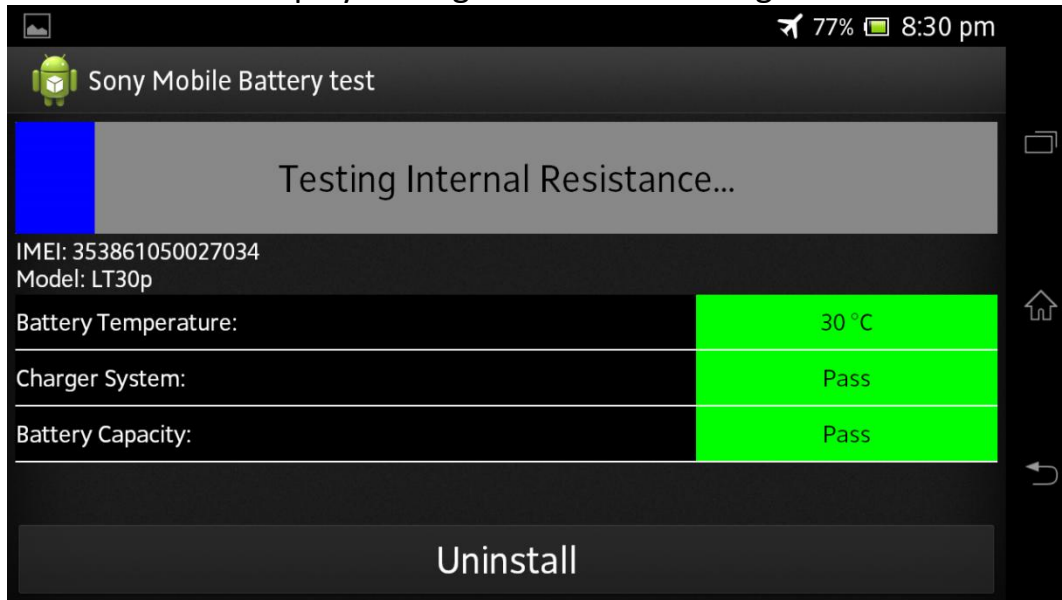
## 3.2 Capacity Test

If the AC Charger test is successful, the program will perform the Capacity test.



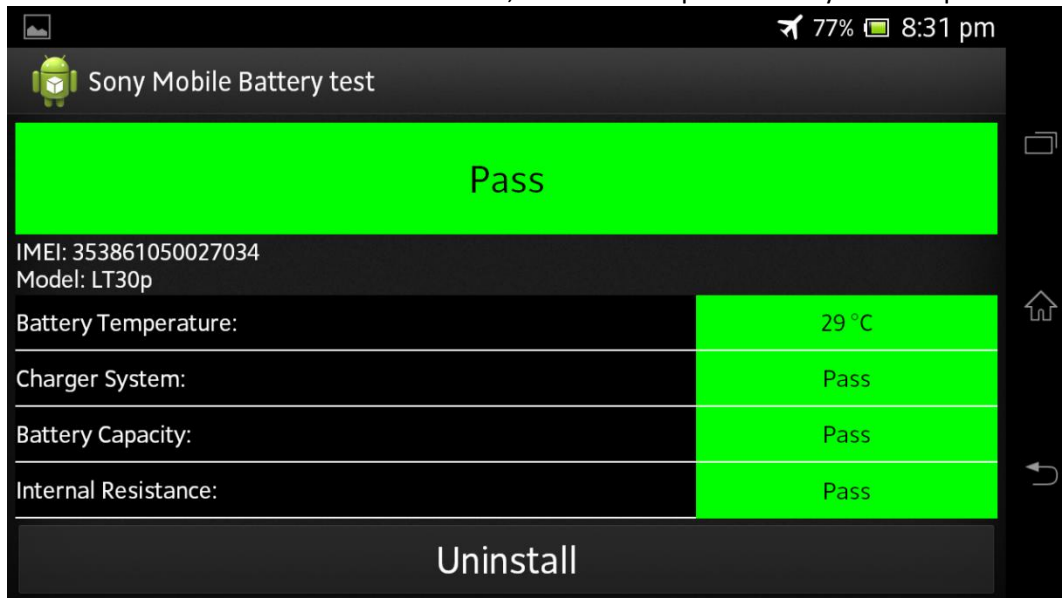
### 3.3 Internal Resistance Test

If the Capacity test is successful the program will perform the Internal Resistance test.  
Please note the display backlight is lowered during this test!



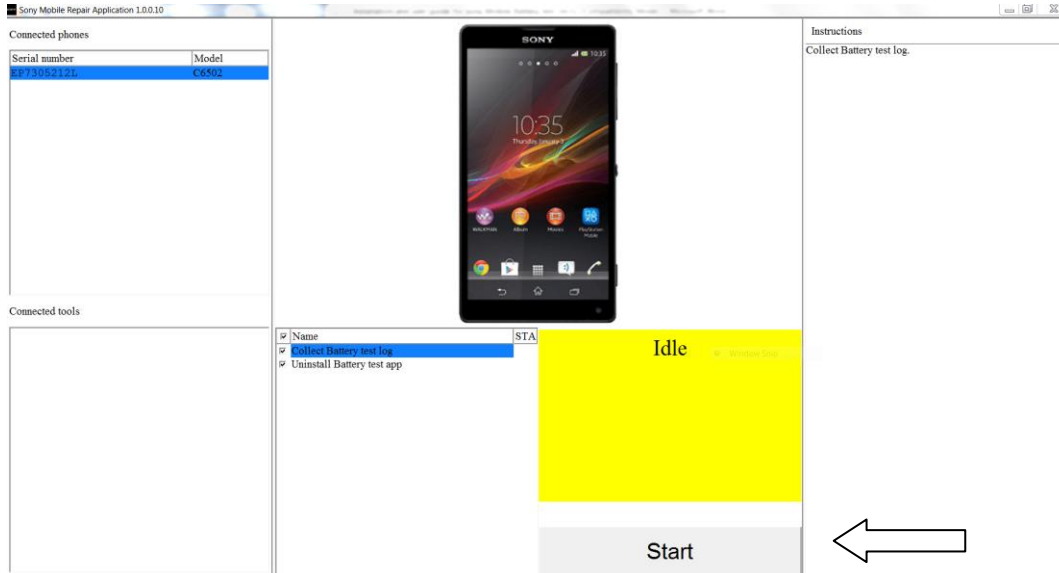
### 3.4 Test complete

If the Internal Resistance test is successful, then the complete Battery test has passed.

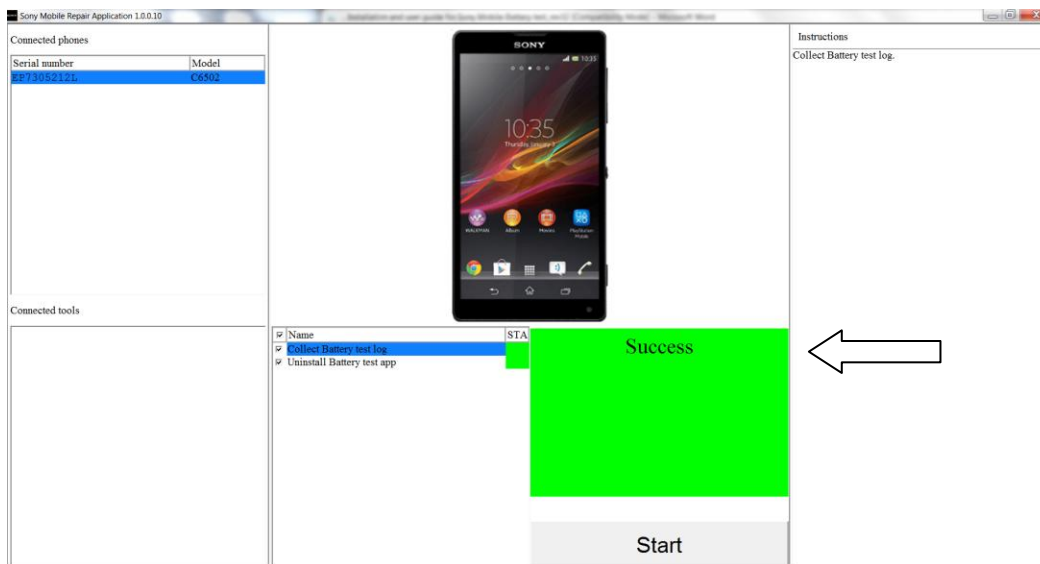


### 3.5 Uninstall and collect log.

Connect Android device to Sony Mobile Repair Application, press Start button to collect log and uninstall Battery test application.



If Success, disconnect Android device.  
Disable USB debugging.

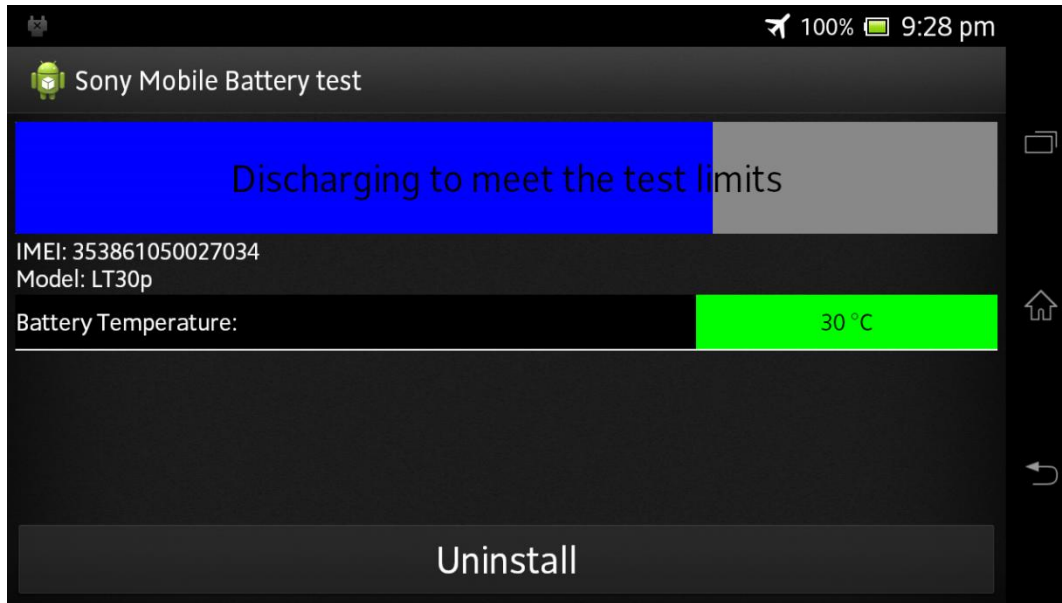


#### 4. Battery Test (battery level above 4,000 V)

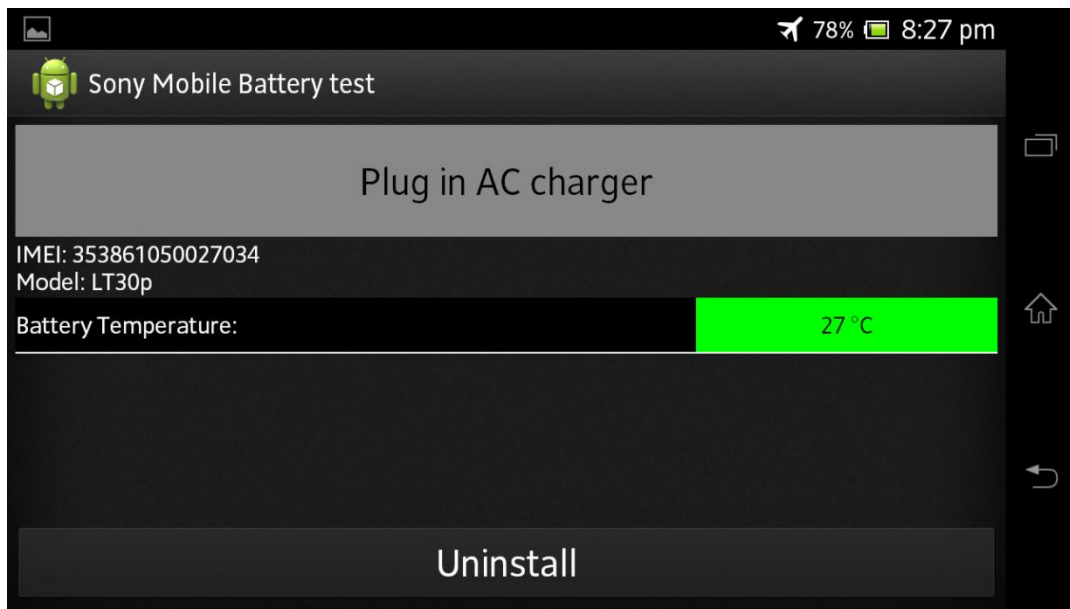
**Note: Voltage level is products unique.**

If battery level is high (more than 4,000 Volt) the below message will be displayed. Total testing time will then be extended.

The program will start discharging to meet the test limits. Wait until this step has finalized which can take approximately up to 25 min.



Insert AC charger, when "Plug in AC charger" pop up and follow the normal test procedure.



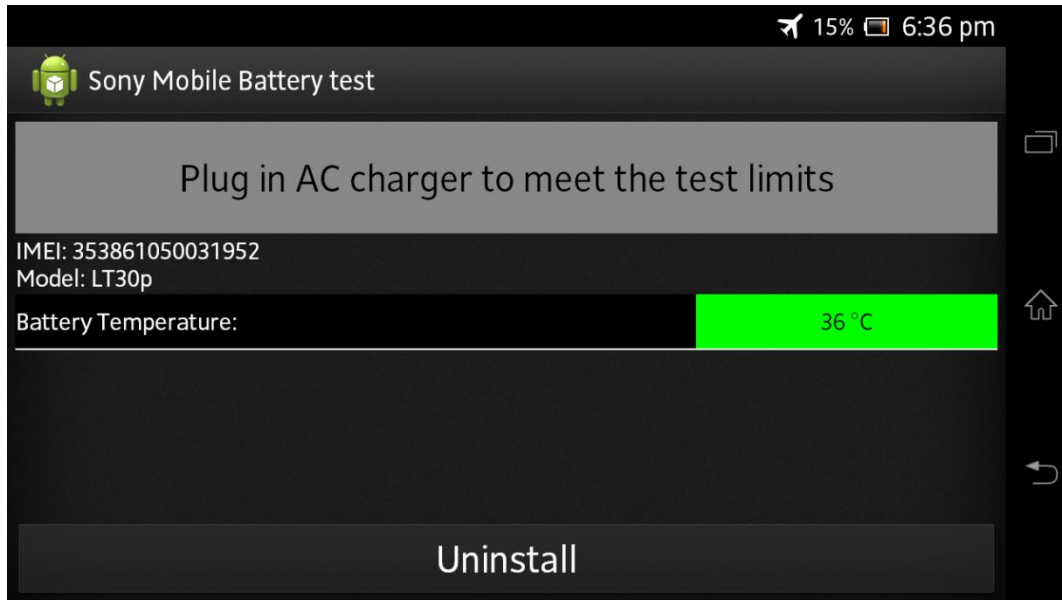


## 5. Battery Test (battery level below 3,680 V)

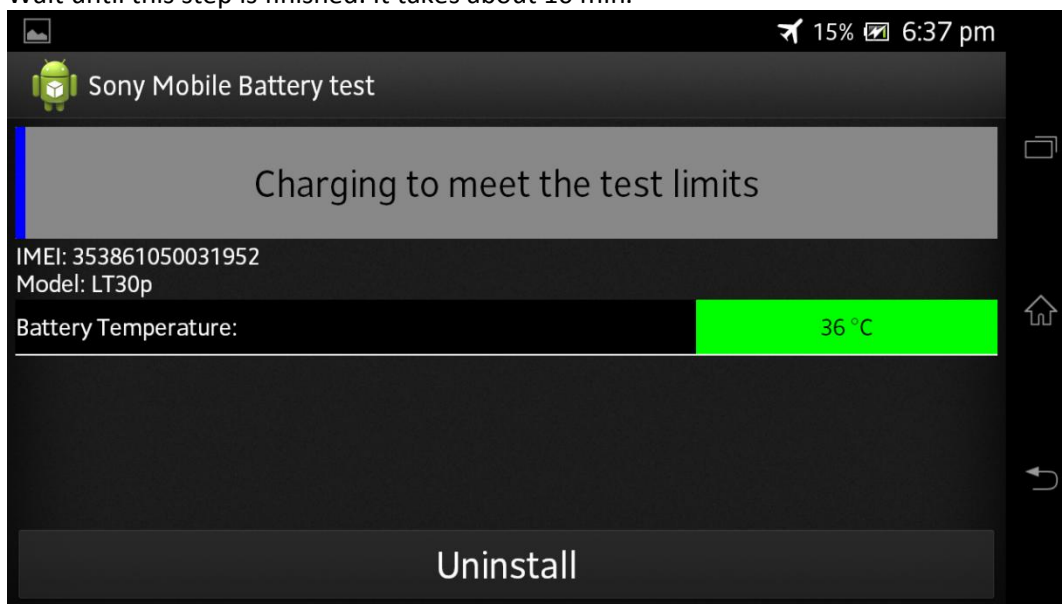
**Note: Voltage level is products unique.**

If battery level is low (below 3,680 Volt) the test will look like this. Total testing time will then be extended.

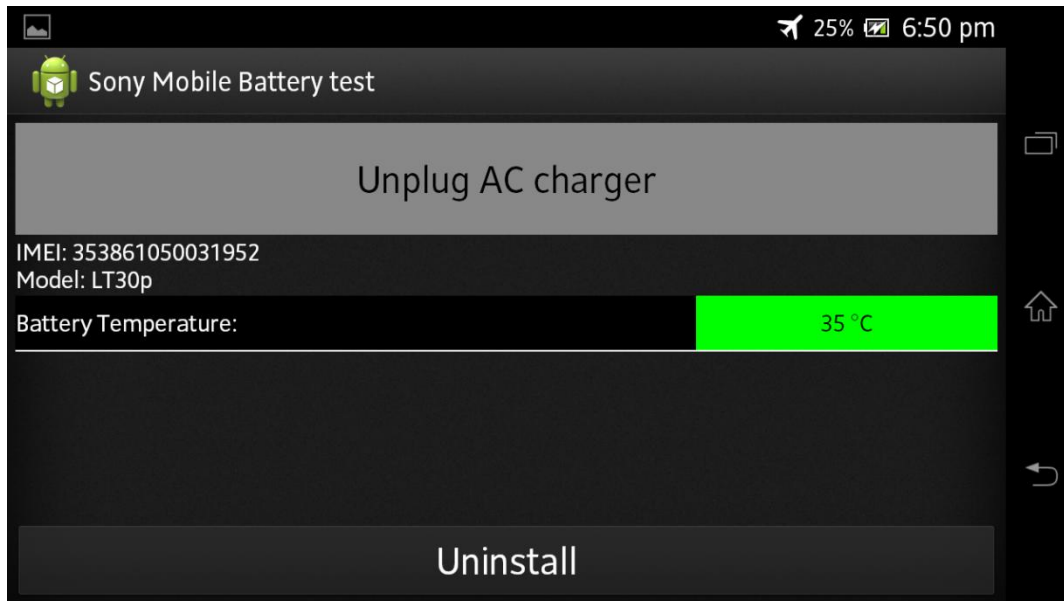
Insert AC charger if Plug in AC charger to meet the test limits pop up.



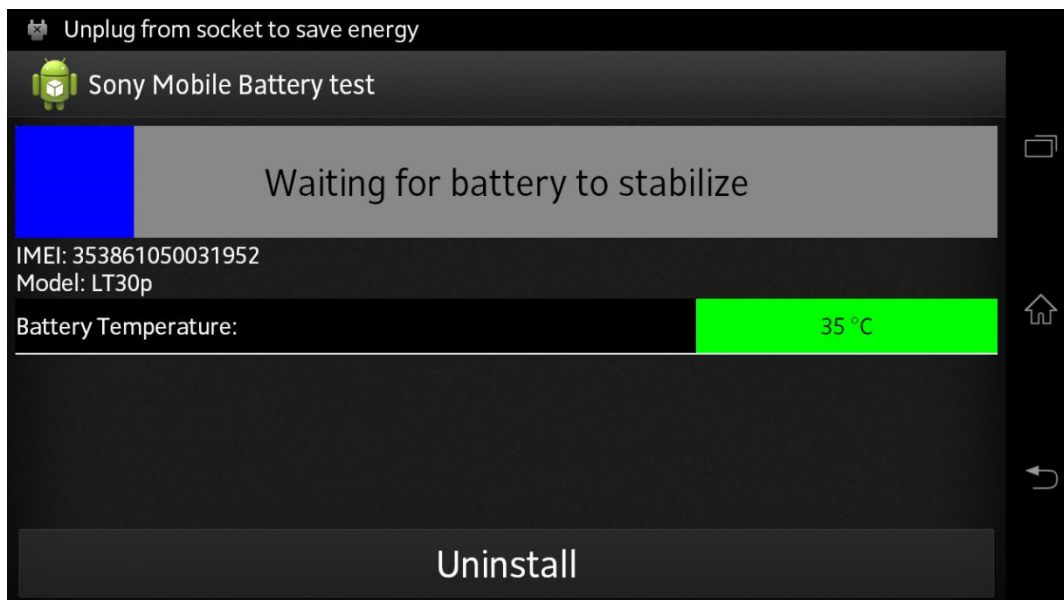
Wait until this step is finished. It takes about 10 min.



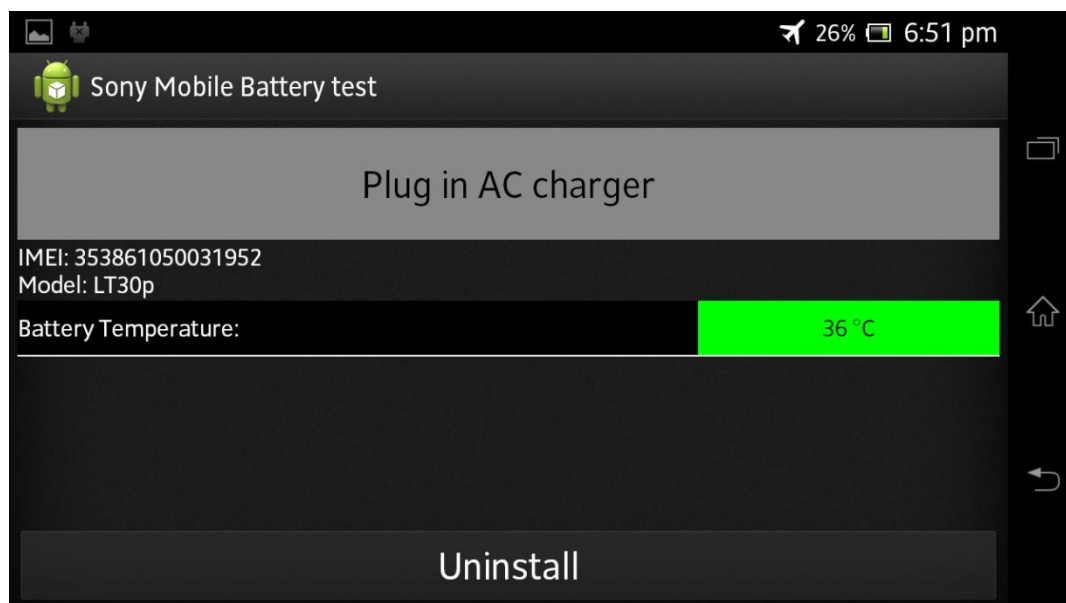
Unplug AC charger, when Unplug AC charger pops up.



Wait for the battery to stabilize.



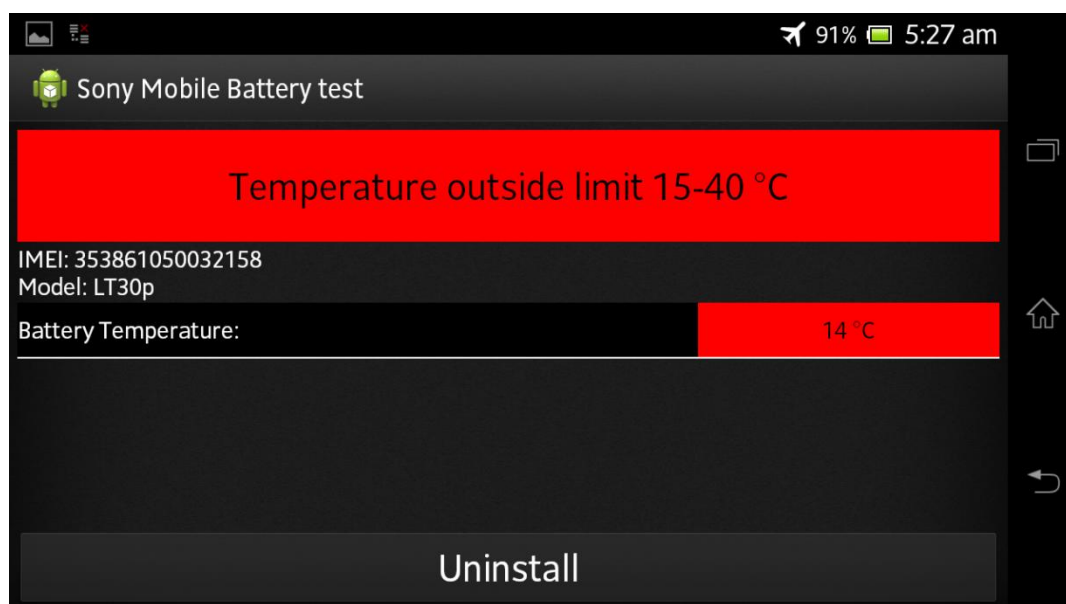
Insert AC charger, when “Plug in AC charger” pop up and follow the normal test procedure.



## 6. Error Messages

### 6.1 Temperature outside limit 15-40C

Temperature outside limit 15-40C will pop up if temperature is below 15C or higher than 40C when test starts. The program will then stop until temperature is in limit.

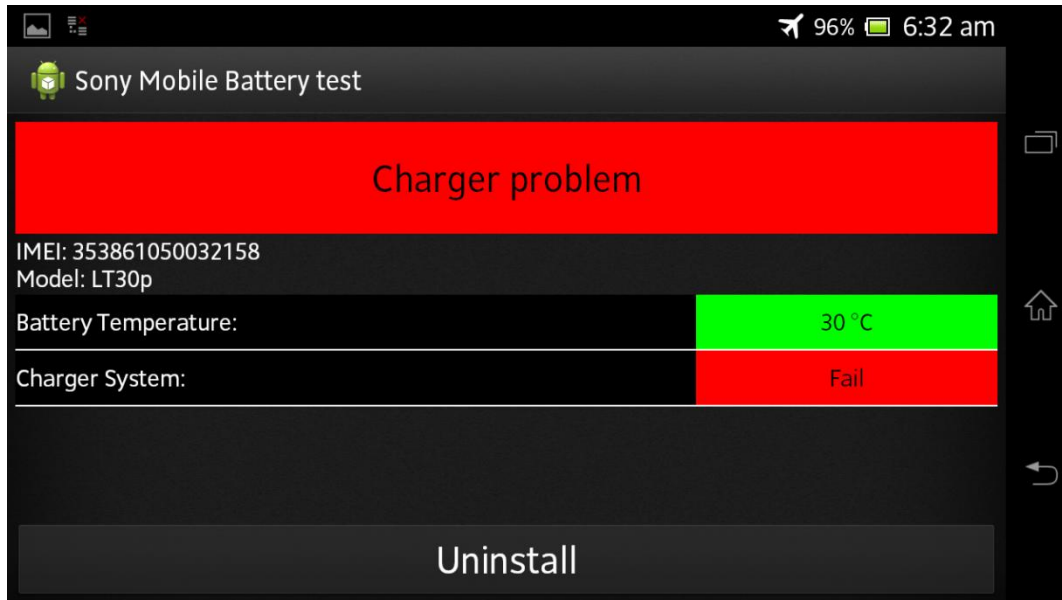


## 6.2 Charger problem

If the charger system test fails, then replace Charger or USB cable and retest (Please note, use EP800 charger and EC480 or EC801 cable as reference).

If the charger system test still fails, then replace battery and retest.

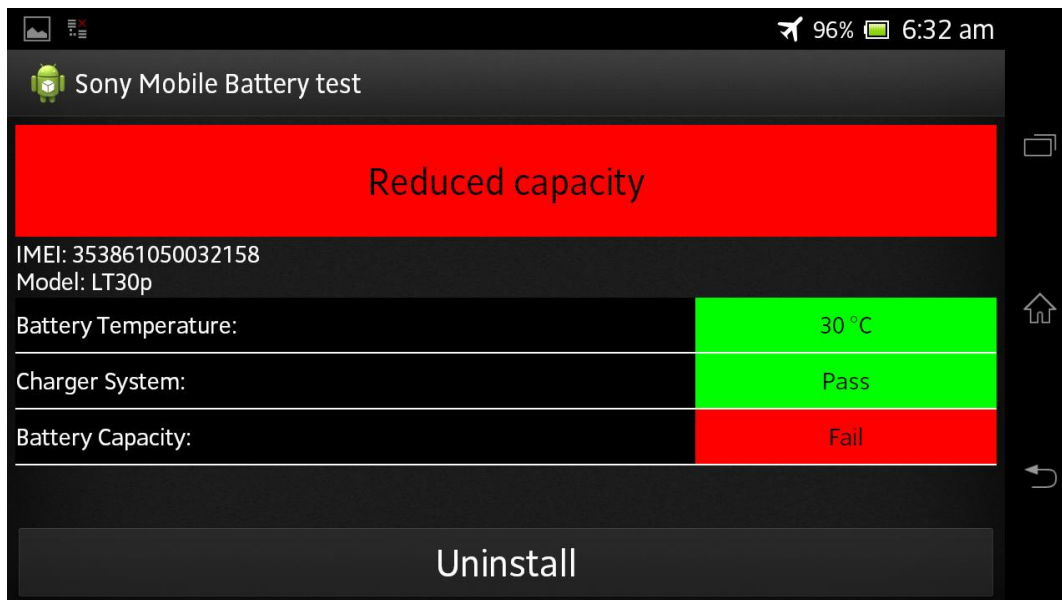
If the charger system test still fails the problem is in the phone unit follow locally instruction.



## 6.3 Reduced Capacity

If the battery capacity test fails, then replace battery and retest.

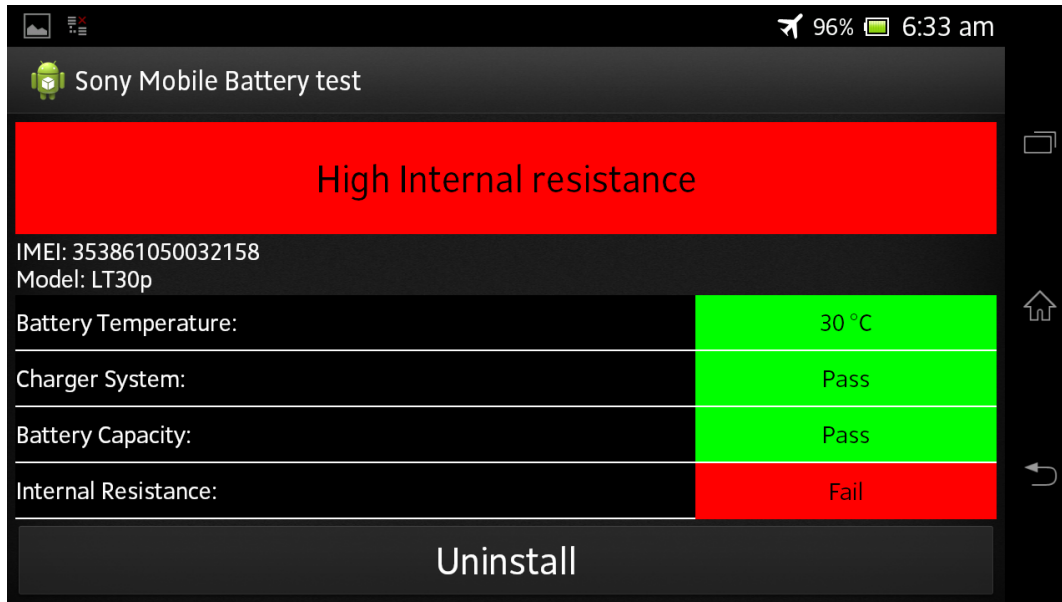
If the battery capacity test still fails the problem is in the phone unit follow locally instruction.



## 6.4 High Internal resistance

If the internal resistance test fails, then replace battery and retest.

If the internal resistance test still fails the problem is in the phone unit follow locally instruction.

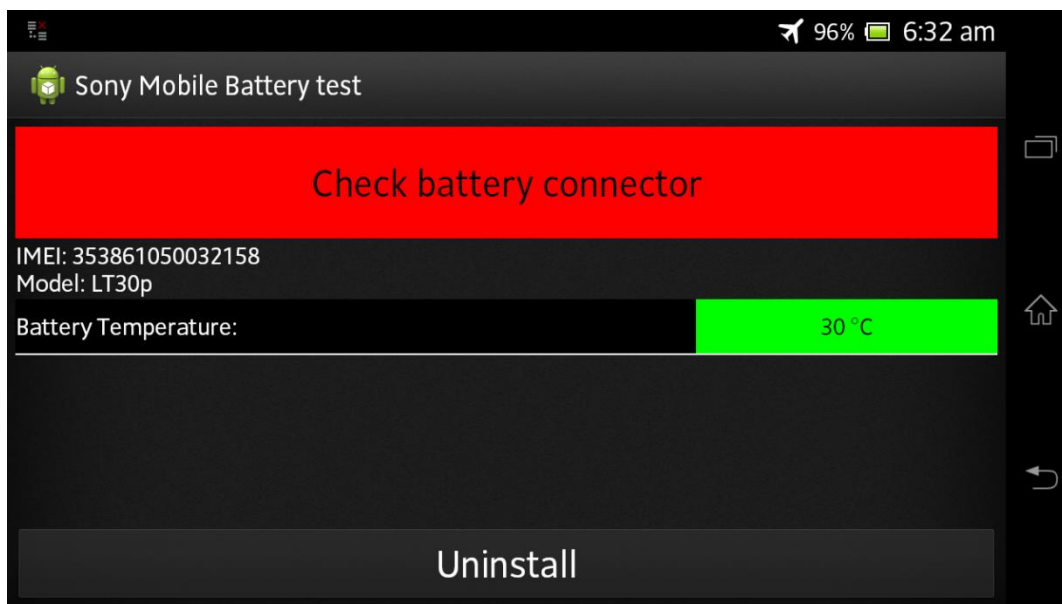


## 6.5 Check battery Connector

Check battery connector will pops up if phone don't identify the Bdata pin.

The program will then stop. Check battery connector then replace battery and retest.

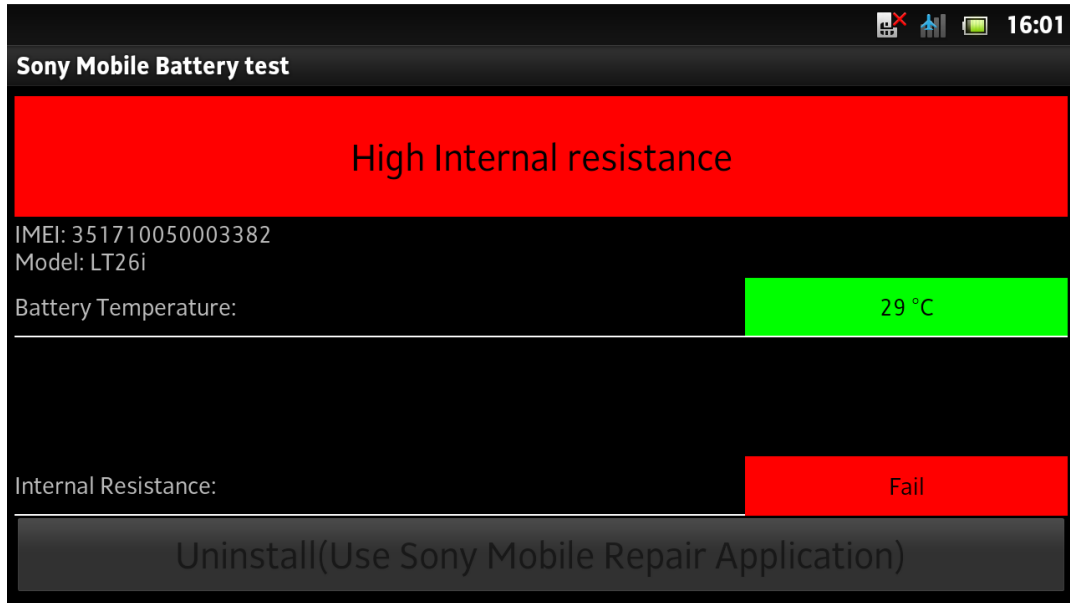
If the Check battery connector test still fails the problem is in the phone unit follow locally instruction.



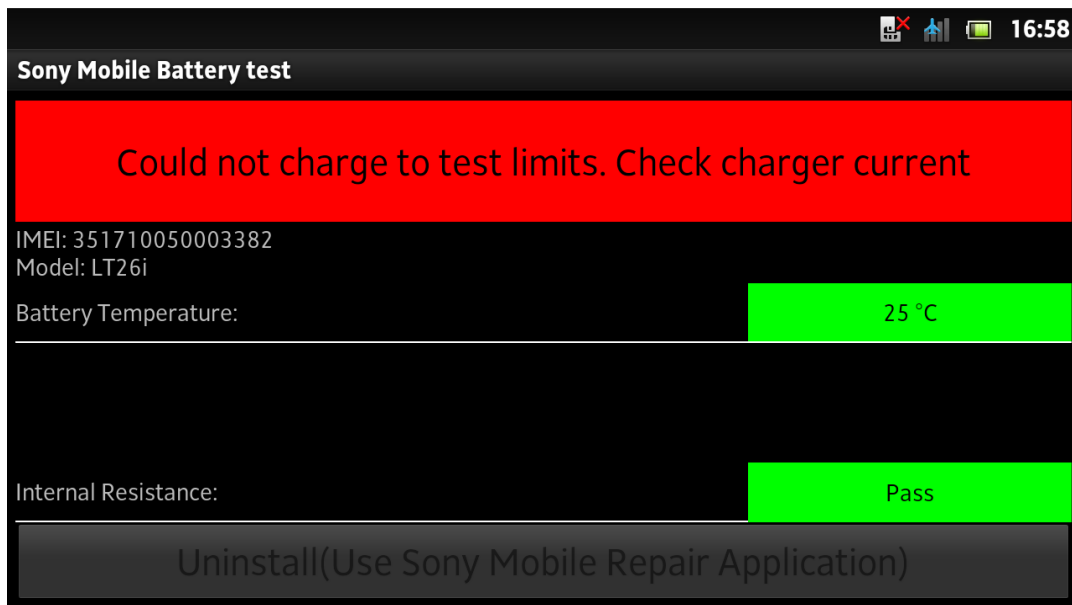
## 6.6 Could not charge to test limits.

If test limits was not posible to achive only Internaly resistance test will be performed.

If the internal resistance test fails, then replace battery and retest.

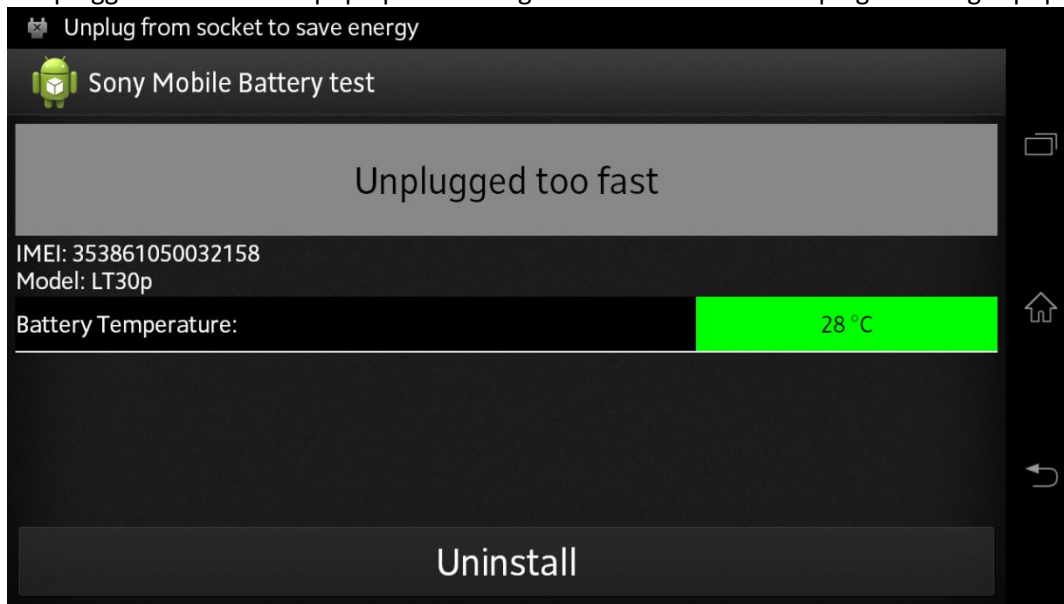


If the internal resistance test pass, then check charger current.

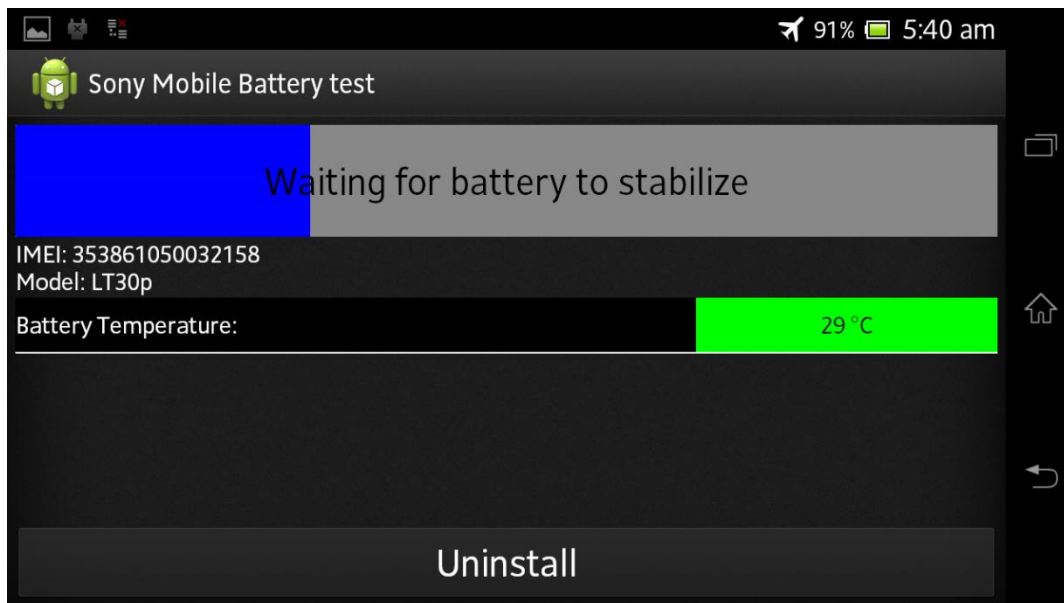


## 6.7 Unplugged too fast

“Unplugged too fast” will pop up if AC charger is removed before unplug AC charger pops up.

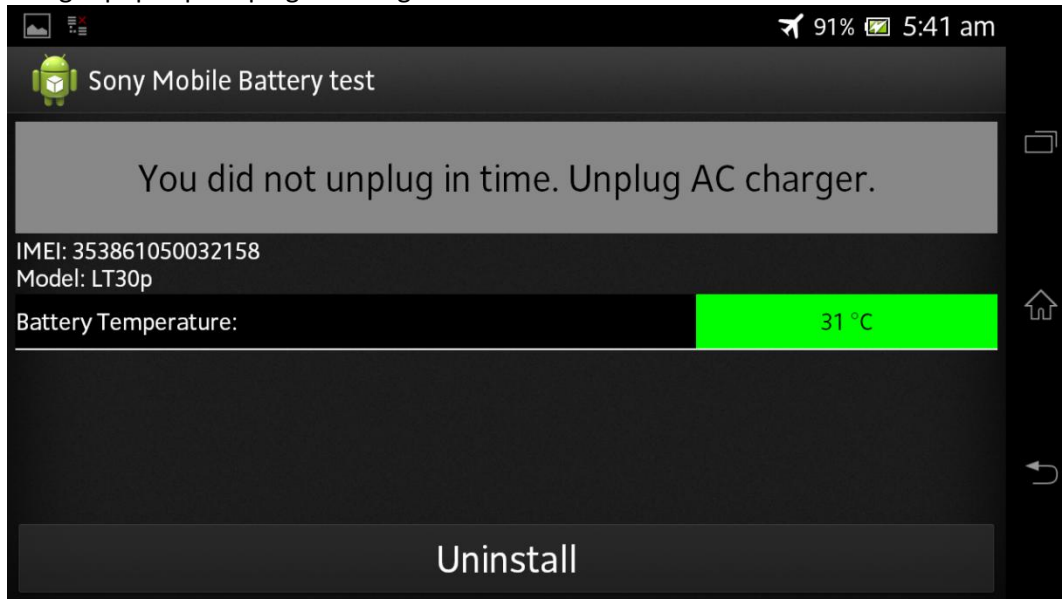


“Waiting for battery to stabilize” pops up, wait and follow normal test procedure

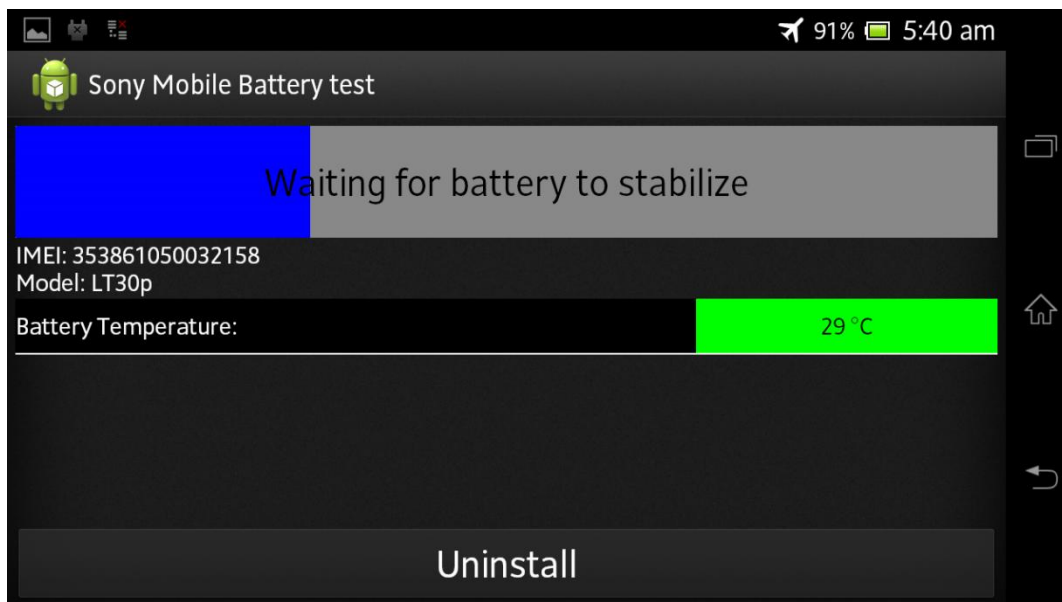


## 6.8 You did not unplug in time

You did not unplug in time will pop up if AC charger is removed more than 10 sec after unplug AC charger pops up. Unplug AC charger.



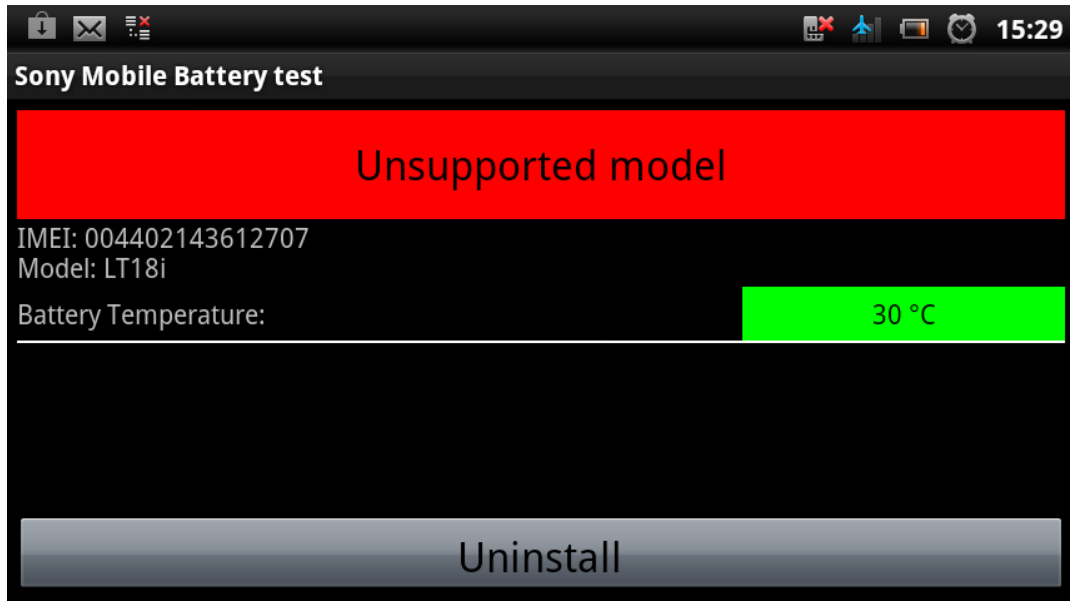
"Waiting for battery to stabilize" pops up, wait and follow normal test procedure





## 6.9 Unsupported Model

Unsupported model will pop up if a model profile is not added in the phone library.



## 6.10 Temperature has been outside the limits during the test

The temperature indicator will be red if the battery temperature has been outside the limits during the test. This test is not reliable and a retest is recommended.

