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Issued by	Project	Doc type	Rev
Martin Wall	Robotic Mower P2	Prod doc	G

## 598 91 31-01-PCBA Spec-Main Board Type 15

### Product Marking of PCBA:

Each printed circuit board assembly (PCBA) shall be marked with:

- A QR code, min 10x10mm, consisting of HID and Rev according to “STD 0002” and “STD 0003”. In these standards the QR code is specified to start with HTTPS://HQR.CODES but this must be excluded.

This means that the complete QR code will be as follows:

HID=xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx&REV=yy, where x the 25 letters in HID and y is one or two letters for revision.

- Product name, (“Main Board Type 15”)

- Part number for the assembly, (“598 91 31-01”)

- Revision for the assembly, (“same as the (first) letter in PCBA revision according to BOM”)

- HID

- Radio certification text:

FCC ID: ZASHQ-BLE-1J

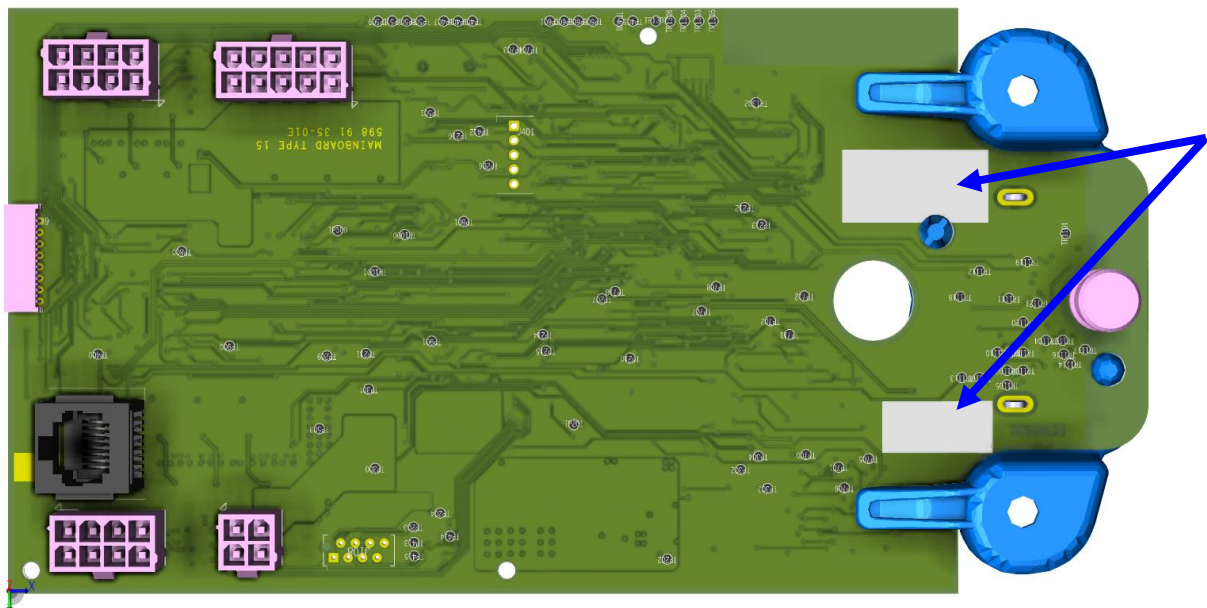
IC:23307-HQBLE1J

Example of marking:

**QR** Main Board Type 15  
598 91 31-01 Rev G  
FCC ID: ZASHQ-BLE-1J  
IC:23307-HQBLE1J

HID: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

The marking shall be placed in one or both of the Silkscreen boxes designated for marking in gerber files.



(If the manufacturer of the PCB wishes to place his logo on the PCBA, this could be placed in the solder mask or on a label. It must not be placed in the copper layer.)

**CPMS reporting of the produced part, including revision, must be done before delivery to Husqvarna, see further description in latest revision of ” 597180601 CPMS specification for vendors”**

## **Components, PCB's and soldering:**

Standard: IPC A-610-E class 2, or latest revision issued.

Compliance with RoHS /REACH.

Item shown in BOM must not contain substances classified as "banned" or "restricted" according to Husqvarna Group Restricted Materials List (see, "www.purchase.husqvarna.com").

## **Mechanical outline requirements:**

Tolerances in x- and y-direction are  $\pm 0.25\text{mm}$ .

## **Production requirements:**

### **AOI:**

- Must be used on every board after SMD and THD soldering process.
- Equipment must be able to inspect according to PCBA layout drawings supplied from Husqvarna.

### **X-ray:**

- X-ray must be done on components that can't be verified in AOI.
- First and last board in a batch must be X-rayed. If the batch is  $> 500$  pc, then each 500<sup>th</sup> board must also be x-rayed.

### **ICT:**

- The same board that is x-rayed must also be tested by a "ICT".

### **FCT:**

- Husqvarna will supply with a PTS spec that every board must be tested according to.
- Supplier/Manufacturer (or third party to them) of the PCBA must develop a test system according to the PTS and be responsible of the maintenance of that.

### **Washing:**

- Boards must be washed before coating.

### **Coating:**

- Coating must be done in a robotic system.

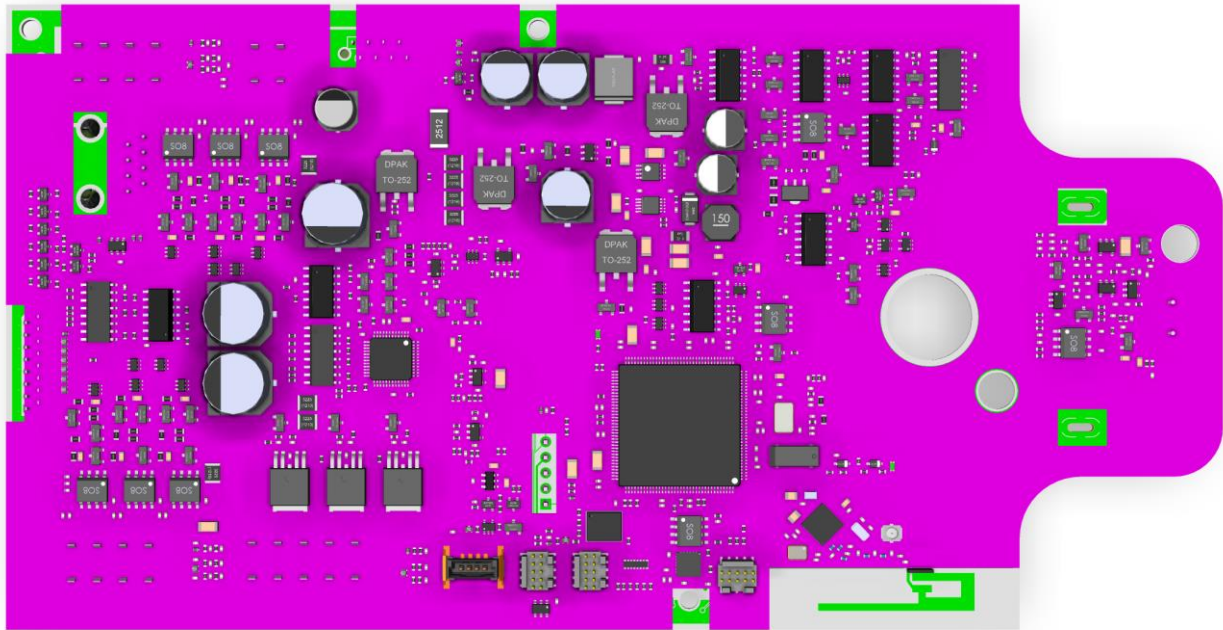
### **Traceability:**

All boards must be possible to be trace on board level.

Note, If upper points couldn't be achieved Husqvarna must be notified for further discussion.

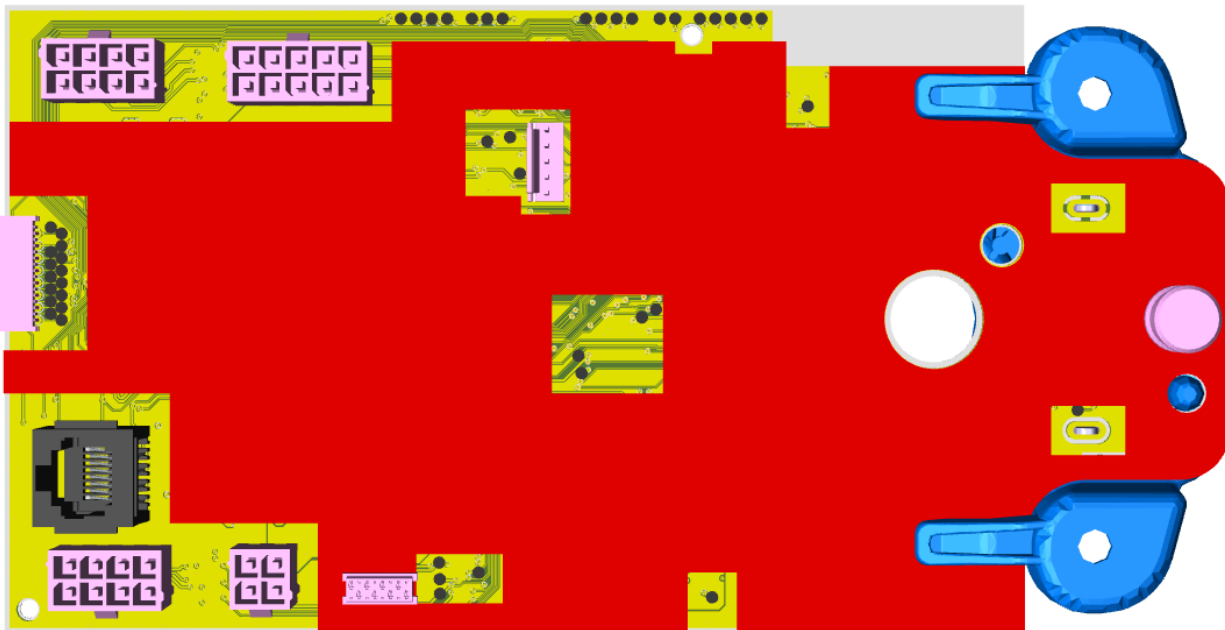
## Coating instruction:

*Component side:*



The coating layer on the component side shall be applied inside the pink area.

*Bottom side*



The coating layer on the bottom side shall be applied inside the red area.

Note: Pictures in above specification are for reference use only and could have minor changes compared to latest release revision of board.

## Revision History

<b>Revision</b>	<b>Date</b>	<b>Issued by</b>	<b>Comments</b>
A.001	2019-10-22	PLI	First draft.
B	2020-03-25	PLI	Added coating instructions and marking instruction with HID
C	2020-04-07	PLI	New top layer coating
D	2020-06-23	JMA	Coating on bottom layer removed
E	2020-09-11	JMA	Coating on bottom layer is back, added text on CPMS. Change location of the silkscreen label
F	2020-10-26	JMA	Nothing has been changed in this document.
G	2020-12-11	JMA	Nothing has been changed in this document.