

## **SERVICE BULLETIN**

### **ESD PREVENTION, REV. 01**

#### **Introduction**

Electrostatic discharge is a transfer of charge between bodies at different electrical potentials. Static electricity can build up high voltages over 10.000 Volt and in low humidity environment more than 30.000 Volts. When two objects with different charges get closer, electrons suddenly flow from one object to the other.



#### **ESD damage can occur at any time**

ESD damage could arise by electronic handling during the whole workflow.

- *Goods entry*
- *Production*
- *Assembly*
- *Storing*
- *Packing*
- *Shipping*
- **After Sales Service**

#### **ESD in After Sales Field Service**

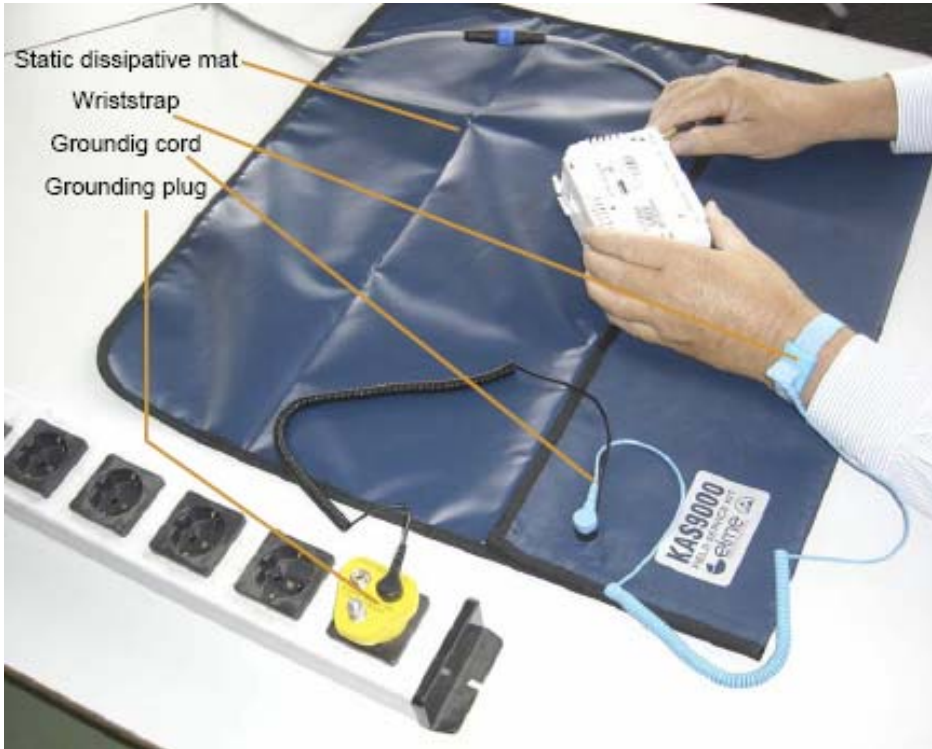
Field Service work can raise a risk of handling ESD sensitive devices like our PCB's for household appliances. In practice, ESD prevention will be often neglected. People are the primary source of ESD. To avoid ESD charges, Service has to follow instructions as described below.



## ESD Rules in After Sales Service

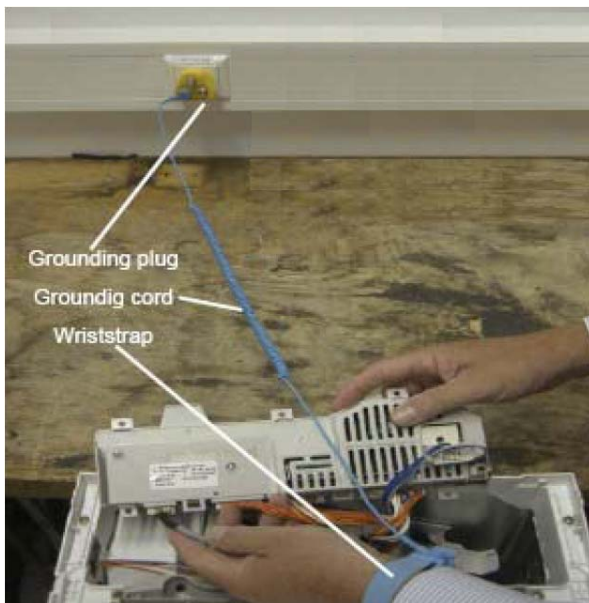
- Assume that all active components are ESD sensitive
- Handle electronic components like PCB's ESD protected area

During installation and programming phases handle the electronic boards as little as possible. Place the electronic board on surfaces that are grounded and never touch the MOS circuit.



Where electronic modules have to be worked for programming, static dissipative matting and wristband has to be connected to ground potential.

During installation or programming a board inside appliances, service engineer has to be grounded.

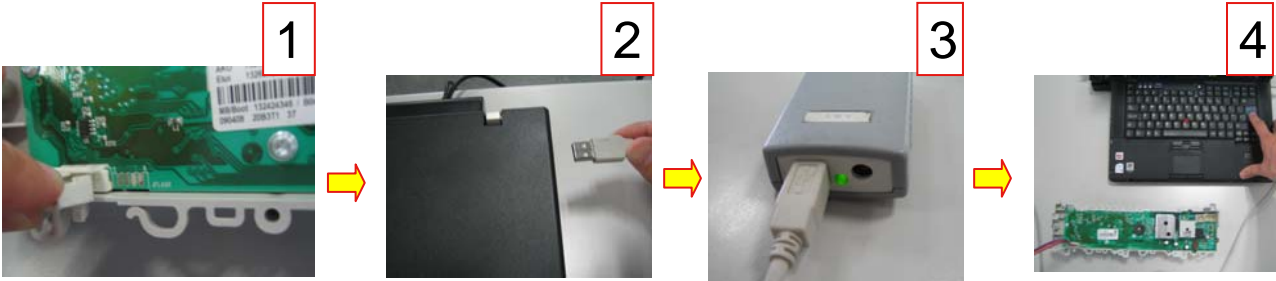


Following this ESD prevention rules is recommended for After Sales Service!

**PRACTICAL SUGGESTION**

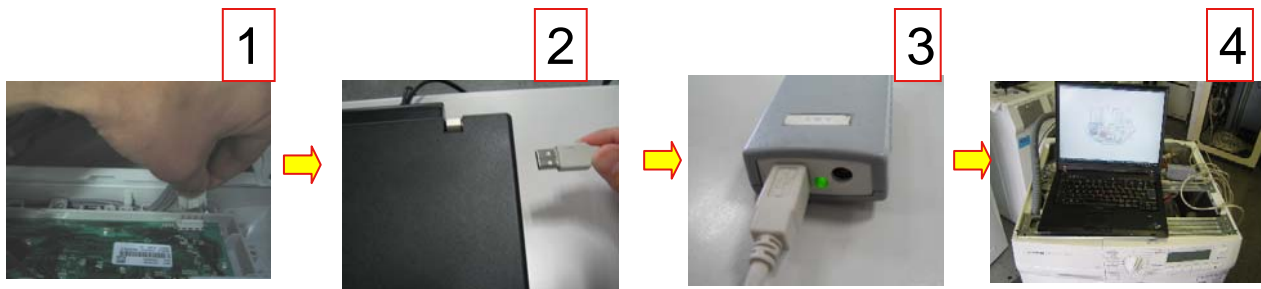
In case of programming:

1. Firstly connect DAAS to PCB
2. Then connect USB plug to PC
3. Then connect the USB to interface device
4. Don't touch the PCB during programming phase (PCB power)



In case of updating software:

1. Firstly connect DAAS to PCB (don't touch the PCB) still on the appliance
2. Then connect USB plug to PC
3. Then connect the USB to interface device
4. Don't touch the PCB during programming phase (PCB power)



**NOTE:**

On the market are available “Mobile ESD Service kits” and “European Plug Connector” for earth connection also:



Part number **405506395/4** is available in Distriparts as “ESD kit for Service”.

**REVISIONS:**

Revision	Date	Description
00	07/2009	Document creation
01	07/2010	Changed photo on bottom page 2 and updated text