TEACHING TROUBLESHOOTING AND REPAIRING IN EPAS

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One of the competencies being taught in Electronics Products Assembly and Servicing is the skills in troubleshooting and repairing. This is the skill that requires much time of the teacher in latter part of the lesson. There are several steps on how to teach them the preliminary checking then proceeding on the complicated part of troubleshooting and as well as repairing.

Teacher should be aware of the techniques on how to explain and discuss the said topic. At first, students must be aware on how to read multi meter readings so as they can tell what trouble or defects occur on the appliance they are dealing with. Second, determine the specific problem by simply asking the symptom. He or she request details of the symptoms like what does happened on the unit or how long it has a problem/defect and did they send it on the other technician before you. This will gives an idea to the technician or students what to do next. Third, try to operate the device. Tests the unit so as to confirmed well the defects that occurred. Fourth, perform visual inspection by applying careful inspection on the physical parts like looking for a loose connection, dented or broken, burned, dislocated, missing and if possible, it’s smell. The following observable physical defects will give idea to the technician what part of the unit is damaged and needed to be repaired. Sometimes the defects are not observable with eyes and sensed with other sensory parts. If it happens to be looked fine, it needed to be checked with the use of multi-meter. This can detects mechanical and operational defects or problems of the unit. By simply putting the range to x1 or x10, resistance checking is done on such appliances. Record the findings for future reference.
The identified defects will be given an appropriate repairing procedure until it will go back to functioning state. Procedures in replacing faulty part are getting the exact and the same amount of the device and buying the same value. If it happened that the value of the device or component is not available, replace it with a little bit higher than the original one. For example, resistor’s value is 10Ω and it is not available, 12-15Ω of resistor can be a substitute for the need of replacing. For final step, after it was repaired, power testing of unit is needed before returning it to the owner of the appliance.

Lastly, the repaired appliance will be graded according to the rubrics. The developed skill can be used as repairing ability as source of income of the EPAS students. And it is one of the competence being observed in the assessment of EPAS students in NC II of TESDA. This are just the simple ways on how teacher in Electronics will teach troubleshooting and repairing.

References:

4 Tips to Strengthen Your Troubleshooting Skills by Global Knowledge.
https://globalknowledge.com/us-en/resources/resource-library/articles/4-tips-to-strengthen-your-troubleshooting-skills/