



## **INSPECTION OF AN AVIONICS TEST EQUIPMENT**

Inspection of avionics test equipment can be for various purposes; amongst which may be: to determine calibration status of the equipment, or the equipment itself is test standards for the calibration of other equipment, it can also be that the equipment is used for the repair and overhaul of other avionics equipment for compliance with CAA and industry standards.

In accordance with the NAMCATS, test equipment that may belong to this categories may be for Aircraft Maintenance Organization (AMO) in general, Air Operators Certificate (AOC) holders (with specific capability). Notable areas in the NAMCATS where such test equipment are required are: -

NAMCATS 43.02.7 Altimeter tests and inspections

NAMCATS 43.02.8 Transponder tests and inspections

NAMCATS 43.02.9 Emergency Locator Transmitter tests and inspections

NAMCATS 43.02.11 Non-Destructive Testing

NAMCATS 43.02.18 Aircraft Compass requirements

### **What to look for**

| S/N | Items   | Sub-items No: | Sub-items  | Seen (s)/ Not Seen (NS)/ NA |           |
|-----|---|---------------|--|-----------------------------|-----------|
|     |   |               |  | Sat ✓                       | Not Sat ✓ |
| 1   | Review operator /agency's maintenance manuals |               | Determine what test equipment is required for the type (s) of work to be undertaking by the operator /agency |                             |           |
| 2   | Verify test equipment capabilities.           |               | For the level of maintenance being performed.  |                             |           |
| 3   | Verify test equipment accessories.            | 3.1           | For condition of repair  |                             |           |
|     |   | 3.2           | Currency of calibration; and   |                             |           |
|     |   | 3.3           | Accuracy of measurements   |                             |           |

|   |   |     |   |  |  |
|---|---|-----|---|--|--|
| 4 | Verify test equipment used to perform quantitative measurements of aircraft components is calibrated. |     | Check calibration status / when next due. (calibrations must be traceable, i.e. who calibrated the equipment)   |  |  |
| 5 | Verify operator /agency has full control of test equipment.   | 5.1 | Ensure test equipment is identified according to operator/agency's manual procedures.   |  |  |
|   |   | 5.2 | Ensure records are kept of date and person/organization calibrating each piece of equipment.  |  |  |
|   |   | 5.3 | Ensure that inspection and calibration of precision tools and test equipment is done according to operator/agency's manual procedures.                          |  |  |
|   |   | 5.4 | ownership should be established, contractual agreements should be evaluated   |  |  |
| 6 | Evaluate Automatic Test Equipment (ATE).  | 6.1 | Ensure ATE test program provides analysis that ensures aircraft components are tested to manufacturer's limits.   |  |  |
|   |   | 6.2 | Verify management control is accomplished for setting limits and standards.   |  |  |
|   |   | 6.3 | Verify management control is accomplished for performance of checks and tests.  |  |  |
|   |   | 6.4 | Verify management control is accomplished for updating listing that identifies each ATE test by number and contains reference to a section of component manual. |  |  |

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|---|--|-----|---|--|--|
|   |  | 6.5 | Verify management control is accomplished for control and identification of software program revision status.                   |  |  |
| 7 | Verify un-calibrated test equipment is identified and operator's manual defines its use. |     | Where test equipment is un-calibrated it must be separated from calibrated tools and it functions defined and labelled as such. |  |  |
| 8 | Verify procedures for incorporating new test equipment.                                  |     | That is, when new test equipment is introduced  |  |  |
| 9 | Verify procedures for handling inoperable test equipment.                                |     | What procedures is in place for inoperable test equipment   |  |  |

|                                     |                  |             |
|-------------------------------------|------------------|-------------|
| Inspector's Comment/ Recommendation |                  |             |
|                                     |                  |             |
| <b>Inspector's name</b>             | <b>Signature</b> | <b>Date</b> |

|  |                  |             |
|--|------------------|-------------|
| Chief Airworthiness' Comment/ Conclusion |                  |             |
|  |                  |             |
| <b>Inspector's name</b>                  | <b>Signature</b> | <b>Date</b> |