

23 05 93 – Testing, Adjusting and Balancing for HVAC

1. Introduction

- A. This section contains the requirements for inspecting, testing, adjusting and balancing of HVAC systems.
- B. The Contractor shall be AABC or NEBB certified and shall furnish all labor, tools and equipment required to complete the work.

2. References

- A. ASHRAE
- B. AABC
- C. NEBB
- D. SMACNA

3. Design Standards

- A. For constant volume systems, the entire system shall be rebalanced after every project.
- B. Requirements and recommendations for acoustical and indoor air quality (IAQ) testing shall be considered and discussed with FMD during design.

4. Documentation and Review Requirements

- A. TAB strategies, procedures and reporting format shall be submitted for review and approval by FMD and design engineer before TAB work begins. The submittal shall include:
 - 1. Specific systems listed clearly identifying each piece of equipment to be included in TAB work with appropriate test procedures and measurements to be taken.
 - 2. Instrument calibration records shall be provided on forms shown in NEBB, AABC or SMACNA with manufacturer's specified accuracy listed.

5. Installation and Performance Requirements

- A. Prior to TAB work, the Contractor must verify the following: systems have been installed and are operating as specified, all balancing devices have been installed, all duct leakage tests have been completed and clean filters have been installed.
- B. All equipment shall be vibration tested after installation.

- C. All instrumentation used for testing shall be calibrated within 6 months of use. Accuracy of the instrumentation shall not be less than what is specified by the instrument manufacturer.
- D. Balancing devices shall be marked by the Contractor to indicate final settings.

6. As-Built Requirements

- A. Final report shall include a summary describing test methods, test results and major corrective actions taken.
- B. Air Handling Unit data shall include a static pressure profile diagram.