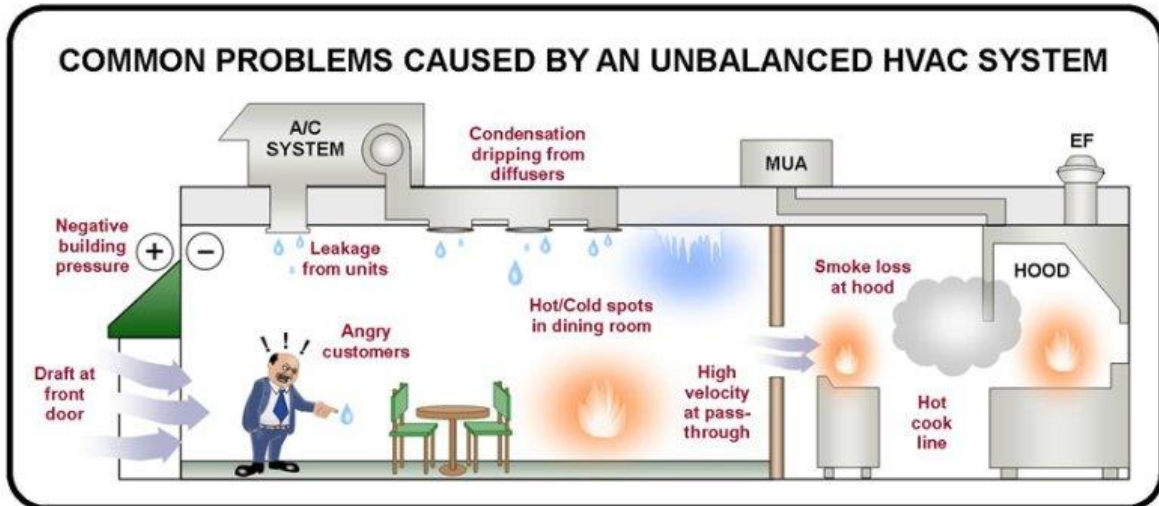


## What is TAB and Why TAB is important process?



The purpose of testing, adjusting, and balancing (TAB) is to assure that an HVAC system is providing maximum occupant comfort at the lowest energy cost possible.

**Testing:** Testing is field evaluation process using TAB specialized and calibrated instruments which will measure air flow, water flow, temperature, velocity, differential pressure, rpm, electrical data and sound level.

: Adjusting is the actual field work. Comparing design data, Base of Design(BOD), Owner Project Requirement(OPR) and TAB specification, adjust fan motors, automatic & manual volume dampers, water balancing valves ( 2-way & 3 way valves), VFD and related devices within tolerable limit to meet the design requirement.

**Balancing:** Balancing is sequential approach to achieve the most accurate balance of air flows and water flows. Especially, using BAS(Building Automation System), balance the flows per each operation mode; occupancy and non-occupancy mode, economizer mode, morning warm-up and night setback, and other required operation mode per contract requirement.

## **TAB work for New and Existing Buildings**

### **New Buildings**

Testing, adjusting, and balancing of all HVAC systems in a new building is needed to complete the installation and to make the system perform as the designer intended. Assuming that the system design and installation meets the comfort needs of the building occupants, testing, adjusting, and balancing of the HVAC system fine tunes occupant comfort levels while keeping energy use to the lowest level possible. This is extremely important in this era of rising energy costs.

It is important to make sure that all factory equipment startup service has been completed before beginning any TAB work. Most specifications on new building construction usually require a factory representative to be present during the initial startup and adjustment of the mechanical equipment—central boilers, chillers, large variable-speed motor drives, and cooling towers. This initial equipment checkout is also usually required to activate the factory warranties and is not part of the TAB contractor's responsibility. After this initial startup service has been completed, the TAB contractor should be informed that the systems are operating properly, that all safety interlocks and protective devices are functioning, and the systems are ready to be balanced.

The TAB phase of any building construction or renovation is intended to verify that all HVAC water- and air-flows and pressures meet the design intent and equipment manufacturer's operating requirements. It is rare to find an HVAC system of any size that will perform completely satisfactorily without the benefit of final adjustments. This is why it is considered a "best practice" for the designer to specify that TAB work be part of the overall HVAC system installation.

### **Existing Buildings**

There are few buildings in existence that have not experienced changes in internal loads and space layout changes since they were designed and built. These buildings should periodically have their HVAC systems rebalanced to achieve maximum operating performance, efficiency, and comfort.