

TAB

journal

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Serving the HVAC Test and
Balance and Engineering Industries

TAB FIELD EXPERIENCE

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Associated Air Balance Council

Spotting a False TAB Report

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Ever hear the one about the auto mechanic at a service station charging for a new alternator, when the only service provided was tightening a wire connection? Most mechanics are honest, but the minority who aren't are enough to create suspicion of the rest. The testing and balancing industry faces a similar problem, in that TAB agencies who fake their reports hurt the reputation of the whole field.

Unfortunately, it isn't particularly difficult to fake a TAB report, and it's profitable for those who are willing to ignore the legal and ethical implications. But while it may not be an exact science to determine if a TAB report has been "created," there are clues. We're not referring to the stories we've all heard about the air outlet diffuser that isn't really tapped into a duct, the motor that isn't really wired, or the add-alternate that has been "balanced" despite not being built—though any single such occurrence is reason enough to reject the entire report and challenge the agency to some repeated field tests. Nor are we faulting the occasional error in field test data or an elusive typo. With a seemingly perfect balance report in hand,

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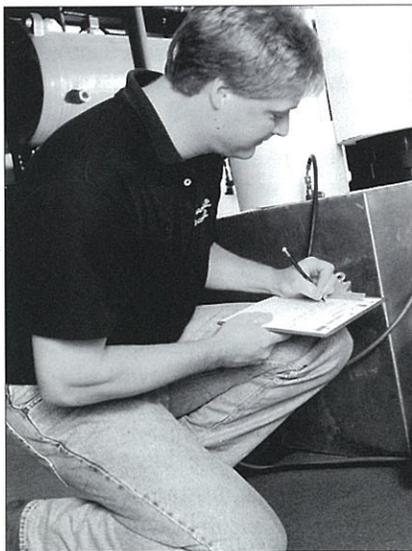
however, there may be subtle clues that imply creation. Following are just a few.

ARE THE NUMBERS TOO GOOD?

A quick review of the report may reveal most of the system at +/-5% of design, which is doubtful if the specification is for a +/-10% balance. Not that 5% can't be done, but no one is likely to expend the extra man-hours unless it is a requirement. The exceptional projects with a 5% balance specification are much more time-consuming than the typical 10%

spec. The difficulty is evident when you consider that good instrumentation is rated for +/-3% accuracy and similar repeatability, and all duct damper adjustments are coarse adjustments. Direct drive fans, large sidewall registers (where even +/-10% is difficult), or very large constant-volume systems with many terminals are just a few areas where a 5% balance is not probable.

Fake traverses are another potential shortcut. A large air handler with a large duct may require several hours just to traverse the supply and return air ducts, and time is money. As an inspector, it is simple to insert a rounded-tip rod, such as a pencil eraser, into the duct traverse holes. If you have to break through the liner, then the holes were drilled just for show, or just a quick center-point test was actually performed instead of a complete traverse. Another good clue is when the traverse holes have been drilled into a sound attenuator, which may not be noticed until one actually attempts to insert a pitot tube. In these cases, if the TAB report indicates complete traverse data for all locations, then that data has been created, not read.



It is the design engineer that we turn to for help in improving the integrity of TAB agencies.

CHANGE ORDERS TELL TALES

Change orders, especially those that add or delete HVAC components, can also be an aid in detecting false reports. Frequently, a few ceiling diffusers are changed from original intent. Compare the TAB report with change orders of record. If even one diffuser that has been deleted from the project via a change order is still reflected in the report with a measured air flow, the entire report and TAB agency should be doubted and challenged on other test data. Such an error should not be dismissed as an easy oversight—it is indicative of a fraudulent report, and it is unlikely that only one number was created.

If a supervisor or TAB engineer discovers that a field technician is taking extreme liberties in order to get a project done in record time, the technician should be severely dealt with. If the practice is not stopped immediately, it becomes apparently acceptable to the TAB agency's operation, and can spread to other technicians. The responsibility for fraud is finally with the owner of the TAB agency.

WHAT TO DO?

TAB Technicians: If you do not have integrity you have nothing to offer.

TAB Agency Owners: Ensure that projects are priced for enough man-hours to actually do the work—if you're far removed from the day-to-day operations, devote just a few days in the field and take notes. Some projects will actually exceed estimated hours if the technicians are doing their job, and for a difficult project it may be the opportunity for a pat on the back and "job well done"

for the technicians! If projects consistently come in with appreciably fewer hours than estimated, be suspicious. Although the pursuit of wealth is the goal of business and opportunities for shortcuts are many, if you accept created reports you condone fraud.

Contractors: Appreciate a thorough test and balance report and expedite your response to discrepancy lists provided by the TAB agency. You will not get this level of service from a low bidder in most markets, but it is the best deal you can hope for to finally complete the project in a timely manner and have a satisfied building owner.

Design Engineers: Read the test and balance report. Exercise your responsibility to have the TAB agency repeat any questionable field tests in your presence. Take advantage of the guaranty provided by AABC if problems are not resolved to your satisfaction. The design engineer's input is essential as you are effectively the customer, and have the need and ability to complain. Because of your specific knowledge of the HVAC system, you can make the most informed complaint using AABC's performance guaranty if it is needed. Please use it. ●