

**SPECIAL
POINTS OF
INTEREST
REGARDING
UTAB:**

- Celebrating 32 years in business.
- 2007 was UTAB's most successful year.
- Over 25% of our TAB technicians are certified Test and Balance Engineers.



Installation of Pressure

Temperature Ports

By Randy Britt
AABC Certified Technician

There seems to be a bit of confusion among mechanical contractors about why and where to install Pressure Temperature Ports (P.T.s—Pete's Plugs) on pumps.

There are three reasons for the installation of P.T.s.

1. To be able to perform accurate dead head on the pump, prove the impeller size, plot the actual impeller

size on a pump curve and allow for the accurate setting of pump for the design GPM. Without the P.T.s installed in the correct location (if installed at all) the information obtained from P.T.s installed or obtained by using gauges other than at correct locations will give false (or invalid) readings. If these false readings are used to plot with on pump curves, the curve will provide

2. inaccurate GPM flow and cause problems during balancing.
2. The triple duty valve is not always installed far enough from the pump discharge to obtain accurate readings. Always refer to the manufacturer's recommendation to the installation of triple duty valves for location and pressure drops for obtaining accurate readings.

(Continued on Page 2)

Where's the Air?

By Walter McCauley, AABC & NEBB Certified TAB Engineer

We have attempted to balance units sets in parallel, more commonly know as TWIN-END SYSTEMS or kits. One would think that when there are two units, each rated at 2000 cfm, the total airflow would be 4000 cfm;

however, we have experienced air flows from 15 to 25 percent lower.

After spending much time and money experimenting with twin-end systems, we have discovered one problem.

When the return duct is on one side only, the air "slides" by the

unit closest to the return air duct drop, causing a high negative static pressure which, in turn, causes that unit to move less air. The unit furthest from the return drop is seeing normal statics, and producing normal airflow (Figure 1).

Solving the problem: Basically,

Installation of Pressure Temperature Ports

(Continued from page 1)

3. P.T.s need to be installed for future maintenance. If a problem with a pump arises it would be very easy to insert probes into the P.T.s and evaluate the pump performance instead of measuring all of the circuit setters. In addition, it can indicate to the TAB technician or maintenance personnel if the suction diffuser (drainer) has a restriction (or blockage).
- example to the head piping person and installer should assist in correct placement of the P.T.s.
- In addition, requesting the installation of extensions for insulation will expedite the test process.

A helpful tip is to keep several printouts (similar to the examples) on hand when performing a project walk-through. Distribution of the

10 Dumb Things Smart People Do When Testing Electricity

Anyone who makes their living by working with electricity quickly develops a healthy respect for anything with even a remote chance of being “live.” Yet the pressures of the getting a job done on time or getting a mission-critical piece of equipment back on line can result in carelessness and uncharacteristic mistakes by even the most seasoned electrician. The list below was developed as a quick reminder

of what **NOT** to do when taking electrical measurements.

1. Replace the original fuse with a cheaper one.
2. Use a bit of wire or metal to get around the fuse all together.
3. Use the wrong test tool for the job.
4. Grab the cheapest DMM on the rack.
5. Leave your safety glasses in your pocket.
6. Work on a live circuit.
7. Fail to use proper lock-out/tag-out procedures.
8. Keep both hands on the test.
9. Neglect your leads.
10. Hang onto your old test tool forever.

For more details regarding each item log on to the digital library at www.fluke.com/library.

WWW...Walter's Winning Words



It's hard to believe that March has come and gone. That means the first quarter of 2008 has now come to a close.

With April's onset we will anticipate the wonderful changes to come with the coming of spring...the return of colorful flowering and budding plants and trees, the welcoming of warmer weather and longer sun-filled days.

There are also new anticipations for the second quarter of 2008 at UTAB. In order to help us better serve our customers:

1. UTAB will be working toward completing the purchase of laptop computers for all certified technicians.
2. UTAB will survey each technician regarding their equipment to improve on consistency of equipment for and to replace aging instruments. All equipment requests are to be submitted to Kathy via verbal or written request.

Also there are plans to begin the technician study classes on April

7th in both Nashville and Knoxville. Classes will be held each Monday morning from 6:00 a.m.—8:00 a.m.. Classes will be taught by technicians who have previously obtained their AABC certifications.

What a great year this has been so far. Let's keep that 'banner' year flag flying (in spite of the frequent gas price increases).

Thanks to everyone for their continued hard work and dedication.

Successful people are always looking for opportunities to help others. Unsuccessful people are always asking, "What's in it for me?"

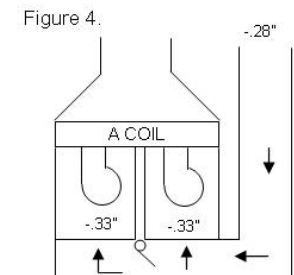
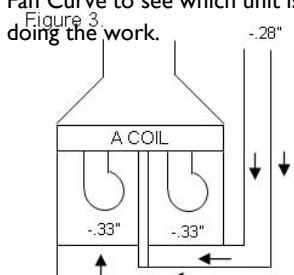
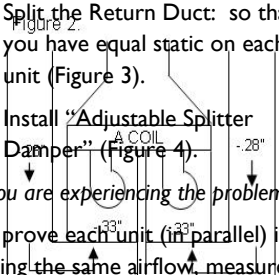
—Brian Tracy

Where's the air? (Continued from pg. 3)

1. Dual Return Ducts: one duct on each side of the equipment (Figure 2).
2. Split the Return Duct: so that you have equal static on each unit (Figure 3).
3. Install "Adjustable Splitter Damper" (Figure 4).

If you are experiencing the problem: To prove each unit (in parallel) is seeing the same air flow, measure the static on the entering side of

the fan. If the statics are different, the units are not working equally. Check your Fan Curve to see which unit is doing the work.



Congratulations to Kate and Steven Voisine-Smith on their impending new arrival expected in April.

- Billy Harrington—4 years at UTAB (3/15/08)
- Brian Harrington—8 years at UTAB (4/20/08)
- Derrick Harrington—6 years at UTAB (4/27/08)



Thoughts are with Jim Smullins and his family with the passing of his grandfather.



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“We do it right!”

United Testing and Balancing, Inc. began as an independent test and balance agency in 1976 and maintains its corporate office in Nashville, Tennessee. Since 1976, UTAB has tested and balanced a variety of projects. We are also qualified to certify cooling tower performances and measure sound and vibration. In conjunction, Phase I Indoor Air Quality (IAQ) investigations and IAQ Assurance Monitoring of buildings for owners and property managers are included in our scope of services.

Old fashioned values with modern technology are combined to assure project success.



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