Jeff Miller - Re: Updated Draft CASE Report on Refrigerant Charge released today

From: Keith Temple <ktemplepe@aol.com>
To: <Jmiller@energy.state.ca.us>
Date: 12/30/2011 2:19 PM
Subject: Re: Updated Draft CASE Report on Refrigerant Charge released today

Jeff,

I will review the revised report and should have comments to you on Monday.

In response to your questions ...
1. Location of Liquid Line and WInter Charge methods:
I would suggest that Appendix RA1 include methods that require specific manufacturer approval (the two mentioned) as opposed to the methods that are generally applicable (in RA3). A note could be added to the beginning of Appendix RA1 so it is clear where any future methods should be inserted.
2. Subcooling default value:
In general I do not recommend a default subcooling value because manufacturer values vary from 4F to about 12F. The danger with a value of 10 or 12F is overcharging units that normally have a lower subcooling value. The older systems I have investigated do not have target values below probably 8F. I am not aware of any correlation between the target value and any other system parameter. If a default value is provided it would be best to restrict it to older systems (definitely existing systems). I would also limit it to 10F.

Let me know if you have any additional questions.

Keith Temple

-----Original Message-----
From: Jeff Miller <Jmiller@energy.state.ca.us>
To: Keith Temple <ktemplepe@aol.com>
Sent: Thu, Dec 29, 2011 8:34 pm
Subject: Updated Draft CASE Report on Refrigerant Charge released today

Keith,
this updated CASE report was released for our use today.
<<2013_CASE_R_Refrigerant_Charge_Testing_Dec_2011.docx>>

I did a comparison between this new draft and the previous draft received approx a year ago, and it seems that main changes are: 1) to state that they investigated temperature split method and recommend eliminating that protocol; and 2) they have revised the recommended protocol language in section 5. I have attached the comparison file for your convenience. <<Refrigerant Charge Testing 120110 v34.docx_Compare_2013_CASE_R_Refrigerant_Charge_Testing_Dec_2011.docx.doc>>

I have not reviewed the revised protocol in section 5 in detail yet but I will do that soon.

If you have time, I think it would be good to get your review of the revised section 5 protocol language. If you could provide your comments directly in the word doc as you have done in previous reviews that would be fine. billable to Subtask 2.1?

here are a couple questions:

Separate appendix (RA1) for Liquid Line and Winter Charge Setup methods?
One question that has arisen for me in the quick review of this new draft is: does it seem correct for us to separate the special case refrigerant charge verifications into a different appendix as we have done with RA1 which has liquid line temperature method and the Condenser Air Exit Restriction (CAER) method (winter charge setup)? I was just reviewing and considering that Proctor has incorporated both of these alternatives into the body of the 3.2 protocol in the CASE report here. If you have an opinion or recommendation I would be

interested.

Default Subcooling target value when Manufacturer spec is not available?
Another question I have (that I may have asked you already, but cannot come up with a record of your answer in my motes or docs): for subcooling method, for the case where it is not possible to get the manufacturer spec for the subcooling target, should the Commission specify a default value be used for demonstrating compliance using the Appendix 3.2 protocol? This situation is most likely to occur with alterations to existing systems. Some HERS raters are very conscientious, and literally cannot complete a verification for lack of manufacturer information for subcooling target values. Proctor has always said that he wanted to be firm in requiring the manufacturers to provide that information, but Proctor has also confided that in his field verification work, though he always tries to get the manufacturer's spec target value, if he cannot get it he uses a default value (10F or 12F as I recall). What is your recommendation for providing a default target subcooling value? yes or no? and if yes, what value for the default?

I hope you are having a good winter break
jeff