

General Service Bulletin

Sporlan R-22 Indoor TEVs High Superheat Symptoms

Models: See Attached List

Serial Numbers: 7231 to 8491

ORDER No: UN-SVB13A-EN

DATE: January 15, 2009

Introduction

After recently identifying and correcting several TEV failure modes, testing has revealed a new failure mode in certain R-22 Indoor Thermal Expansion Valves (TEVs), built by Sporlan. The supplier of the ballast material allowed moisture to be introduced into the sensor bulb circuit portion of the power element of the valves. Testing of the affected valves revealed that over time, reaction to this moisture reduces the response to temperature changes. Although failed valves may exhibit effects on system performance similar to previously identified failure modes, the root cause is not related. This bulletin will affect only R-22 Sporlan indoor TEVs that fail to maintain correct superheat control. **The action described in this bulletin is not being taken to address a safety concern.**

Corrective Action

There are many contributors to unusual system operation that may affect cooling operation and customer comfort. (See Flowchart on page 4 for diagnostics)

Some of these include:

- Incorrect air flow across the cooling coil
- Outside air leakage into the return air supply
- Incorrect refrigerant charge
- Debris accumulation on the screen just ahead of the inlet to the TEV
- Indoor temperature higher than 85° F or relative humidity higher than 65%

We have confirmed that some units of certain Sporlan TEVS may develop a slow decrease in refrigerant flow capability due to recent test findings; but, all of the contributors listed above should be ruled out before making a diagnosis that the thermal expansion valve is not performing correctly. This new failure mode would lead to a lack of cooling due to low refrigerant flow and allow higher than normal superheat when a TEV is affected. When the technician has confirmed correct air flow volume and refrigerant charge amounts but measures higher than 20 to 25° superheat, this would indicate the TEV is malfunctioning and should be replaced.



WARNING

Personal Protective Equipment (PPE) Required!

Always refer to appropriate MSDS and OSHA guidelines when handling fluorocarbon refrigerants. Use proper breathing, eye, and body protection during the handling of fluorocarbon refrigerants. Failure to follow proper handling guidelines could result in death or serious injury.

Procedure:

1. Using the service valves (split units), pump all refrigerant into the condensing coil or (package units) recover the R-22 from the system.
2. Remove original TEV and replace with new one. *Note: protect (i.e. wet rag or equivalent) valve from high temperature if using a torch during removal and installation and pressure test for leaks using dry nitrogen.*
3. Evacuate the system to below 500 microns.
4. Recharge with R-22 refrigerant to the proper subcooling range (10-15°).
5. Run the system for 10 minutes and recheck subcooling.
6. Measure indoor wet bulb and dry bulb temperatures (*Indoor dry bulb and relative humidity should be less than 85° and 65% RH to achieve "normal" system pressures and temperatures*)
7. Calculate subcooling and superheat
 - Subcooling should be below 18°F
 - Superheat should be below 25°

Parts Ordering Information

Order the replacement TEV from the list on page 3 for the specific model that you are working on. These should be ordered from your local Trane Parts Center or the Trane or American Standard independent parts distributor.



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American Standard

HEATING & AIR CONDITIONING

Model List
2TEE3C31A1000AA
2TEE3C37A1000AA
2TEE3C40A1000AA
2TEE3C65A1000AA
2TEE3D31A1000AA
2TEE3D37A1000AA
2TEE3D40A1000AA
2TEE3D65A1000AA
2TEE3F31A1000AA
2TEE3F37A1000AA
2TEE3F40A1000AA
2TEE3F65A1000AA
2TXAA018BC3HUAA
2TXAA024BC3HUAA
2TXAB025AS3HUAA
2TXAB025BC3HUAA
2TXAB031AS3HUAA
2TXAB031BC3HUAA
2TXAB036AS3HUAA
2TXAB036BC3HUAA
2TXAB042BC3HUAA
2TXAB048BC3HUAA
2TXAC037AS3HUAA
2TXAC037BC3HUAA
2TXAC043BC3HUAA
2TXAC049BC3HUAA
2TXAC054AS3HUAA
2TXAC060BC3HUAA

Model List
2TXAD050BC3HUAA
2TXAD061BC3HUAA
2TXAD064BC3HUAA
2TXAD065AS3HUAA
2TXCA018BC3HCAA
2TXCA024BC3HCAA
2TXCB025BC3HCAA
2TXCB031AS3HCAA
2TXCB031BC3HCAA
2TXCB036AS3HCAA
2TXCB036BC3HCAA
2TXCB036BC3HMAA
2TXCB042BC3HCAA
2TXCB048BC3HCAA
2TXCC037AS3HCAA
2TXCC037BC3HCAA
2TXCC043BC3HCAA
2TXCC049BC3HCAA
2TXCC054AS3HCAA
2TXCC060BC3HCAA
2TXCD050BC3HCAA
2TXCD061BC3HCAA
2TXCD064BC3HCAA
2TXCD065AS3HCAA
2TXFH033AS3HHAA
2TXFH033AS3HHAB
2TXFH041AS3HHAA
2TXFH041AS3HHAB

Model List
2TXFH054AS3HHAA
2TXFH054AS3HHAB
2TXFH063AS3HHAA
2TXFH063AS3HHAB
2WCC3024A1000AA
2WCC3030A1000AA
2WCC3030A1000AB
2WCC3036A1000AA
2WCC3036A1000AB
2WCC3042A1000AA
2WCC3048A1000AA
2WCC3060A1000AA
2WCC3060A1000AB
2WCX3024A1000AA
2WCX3030A1000AA
2WCX3030A1000AB
2WCX3036A1000AA
2WCX3036A1000AB
2WCX3042A1000AA
2WCX3048A1000AA
2WCX3060A1000AA
2YCC3024A1040AA
2YCC3024A1040AB
2YCC3024A1064AA
2YCC3024A1064AB
2YCC3030A1040AA
2YCC3030A1064AA
2YCC3030A1075AA
2YCC3036A1064AA

Model List
2YCC3036A1075AA
2YCC3036A1075AB
2YCC3036A1096AA
2YCC3042A1064AA
2YCC3042A1075AA
2YCC3042A1096AA
2YCC3048A1075AA
2YCC3048A1096AA
2YCC3048A1120AA
2YCC3060A1096AA
2YCC3060A1096AB
2YCC3060A1120AA
2YCC3060A1120AB
2YCX3024A1040AA
2YCX3024A1064AA
2YCX3030A1040AA
2YCX3030A1064AA
2YCX3030A1075AA
2YCX3036A1064AA
2YCX3036A1075AA
2YCX3036A1096AA
2YCX3042A1064AA
2YCX3042A1075AA
2YCX3042A1096AA
2YCX3048A1075AA
2YCX3048A1096AA
2YCX3048A1120AA
2YCX3060A1096AA
2YCX3060A1120AA

Part Nbr	Part Nbr
VAL04266	VAL08612
VAL04267	VAL08613
VAL04338	VAL08681
VAL04416	VAL08682
VAL04471	VAL08683
VAL04827	VAL08684
VAL07493	VAL08685
VAL07612	VAL08705
VAL07613	VAL08706
VAL07629	VAL08707
VAL07937	VAL08708
VAL08322	VAL08711
VAL08323	VAL08712
VAL08324	VAL08722
VAL08325	VAL08723
VAL08607	VAL08724
VAL08608	VAL08725
VAL08609	VAL08768
VAL08610	VAL08769
VAL08611	VAL08770
VAL08612	VAL08771

Material Authorization

This bulletin authorizes one replacement TEV for each of the affected model and serial number units when required.

Material Disposition

After completing the repair, follow the guidelines of the local parts and warranty center to return the affected part with the warranty claim to their designated location. Part claims cannot be paid if no part is returned.

Questions

Dealers and Distributor personnel Contact your local Field Service Representative. FSRS should contact Field Operations Excellence.

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File Number	SV-SVB13A-EN 01/15/2009
Supersedes	New
Stocking Location	Electronic Only
Trane has a policy of continuous product data and product improvement and reserves the right to change design and specifications without notice. Only qualified technicians should perform the installation and servicing of equipment referred to in this bulletin.	

