

# TXV TROUBLESHOOTING

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ASSUMPTIONS & POSSIBLE CAUSES	REMEDY
<b>ROOM TEMPERATURE TOO HIGH, WITH HIGH SUPERHEAT:</b>	
Pressure drop across evaporator too high.	Replace expansion valve with valve having external pressure equalization. Reset superheat on expansion valve if necessary.
Lack of subcooling ahead of expansion valve.	Check refrigerant subcooling ahead of expansion valve. Establish greater subcooling.
Pressure drop across expansion valve less than the pressure drop the valve is sized for.	Check pressure drop across expansion valve. Try replacement with larger orifice assembly and/or valve. Reset superheat on expansion valve if necessary.
Bulb located after a heat exchange or too close to large valves, flanges, etc.	Check bulb location. Locate bulb away from large valves, flanges, etc.
Expansion valve blocked with ice, wax, or other impurities.	Clean ice, wax or other impurities from the valve. Check sight glass for color change (green means too much moisture). Replace filter drier if fitted. Check oil in the refrigeration system. Has the oil been changed or replenished? Has the compressor been replaced? Clean the filter.
Expansion valve too small.	Check refrigeration system capacity and compare with expansion valve capacity. Replace with larger valve or orifice. Reset superheat on expansion valve.
Charge lost from expansion valve.	Check expansion valve for loss of charge. Replace expansion valve. Reset superheat on expansion valve.
Charge migration in expansion valve.	Check whether expansion valve charge is correct. Identify and remove cause of charge migration. Reset superheat on expansion valve if necessary.
<b>ROOM TEMPERATURE TOO HIGH, WITH LOW SUPERHEAT:</b>	
Expansion valve bulb not in good contact with suction line.	Ensure the bulb is secured on suction line. Insulate bulb if necessary.
Evaporator completely or partly iced up.	De-ice evaporator if necessary.
<b>REFRIGERATION SYSTEM HUNTS:</b>	
Expansion valve superheat set at too small a value.	Reset superheat on expansion valve.
Evaporator completely or partially iced up.	De-ice evaporator if necessary.
<b>REFRIGERATION SYSTEM HUNTS AT TOO HIGH A ROOM TEMPERATURE:</b>	
Expansion valve bulb location inappropriate, e.g. on collection tube, riser after oil lock, or near large valves, flanges or similar.	Check bulb location. Locate bulb so that it receives a reliable signal. Ensure that bulb is secured on suction line. Set superheat on expansion valve if necessary.
<b>SUCTION PRESSURE TOO HIGH:</b>	
Liquid flow. Expansion valve too large. Expansion valve setting incorrect.	Check refrigeration system capacity and compare with expansion valve capacity. Replace with larger valve or orifice. Reset superheat on expansion valve if necessary.
Charge lost from expansion valve.	Check expansion valve for loss of charge. Replace expansion valve. Reset superheat on expansion valve.
Charge migration in expansion valve.	Increase superheat on expansion valve. Check expansion

	valve capacity in relation to evaporator duty. Replace expansion valve or orifice with smaller size. Reset superheat on expansion valve if necessary.
<b>SUCTION PRESSURE TOO LOW:</b>	
Pressure drop across evaporator too high.	Replace expansion valve with valve having external pressure equalization. Reset superheat on expansion valve if necessary.
Lack of subcooling ahead of expansion valve.	Check refrigerant subcooling ahead of expansion valve. Establish greater subcooling.
Evaporator superheat too high.	Check superheat. Reset superheat on expansion valve.
Pressure drop across expansion valve less than pressure drop valve is sized for.	Check pressure drop across expansion valve. Replace with larger orifice assembly and/or valve if necessary.
Bulb location too cold, e.g. in cold air flow or near large valve, flanges, etc.	Check bulb location. Insulate bulb if necessary. Locate bulb away from large valves, flanges, etc.
Expansion valve too small.	Check refrigeration system capacity and compare with expansion valve capacity. Replace with larger valve or orifice. Reset superheat on expansion valve.
Expansion valve blocked with ice, wax or other impurities.	Clean ice, wax and other impurities from valve. Check sight glass for colour change (yellow means too much moisture). Replace filter drier if fitted. Check oil in the refrigeration system. Has the oil been changed or replenished? Has the compressor been replaced? Clean the filter.
Charge lost from expansion valve.	Check expansion valve for loss of charge. Replace expansion valve. Reset superheat on expansion valve.
Charge migration in expansion valve.	Check charge in expansion valve. Reset superheat on expansion valve if necessary.
Evaporator wholly or partly iced up.	De-ice evaporator if necessary.
<b>LIQUID HAMMER IN COMPRESSOR:</b>	
Expansion valve capacity too large.	Replace expansion valve or orifice with smaller size. Reset superheat on expansion valve if necessary.
Superheat on expansion valve set too low.	Increase superheat on expansion valve.
Expansion valve bulb not in good contact with suction line.	Ensure that bulb is secured on suction line. Insulate bulb if necessary.
Bulb located too warm or near large valves, flanges, etc.	Check bulb location on suction line. Move bulb to better position.
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**PROPER GROUNDING:** Improper unit grounding can result in pin holes developing in the refrigeration and water piping. Make sure the main unit and all connecting hardware is well grounded.