



HOLDEN VE COMMODORE, WM STATESMAN V6 AND V8 POOR FRONT WINDSCREEN DEMISTING AT LOW AMBIENTS	TSB #:	63
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Initial Once Read:		

During a recent cold weather spell, it was noticed that on a Holden Commodore VE at around +5°C ambient temperature, the A/C compressor would not activate when front windscreen demist mode was selected.

Without the aid of A/C for dehumidification, a misted front windscreen was impossible to see through and made it unsafe to drive the vehicle.

Below is an overview of the problem at hand.

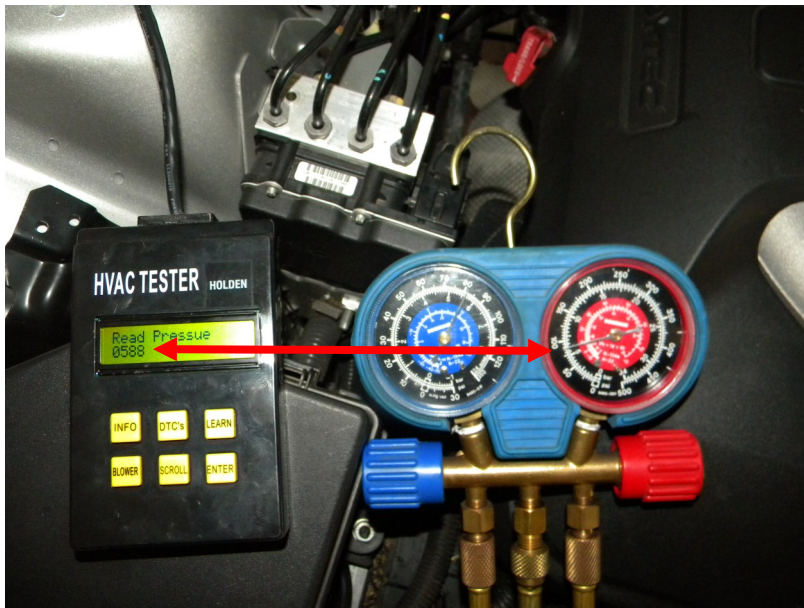
The pressure transducer transmits voltage feedback signals to the power train module (PCM) which are then converted to a calculated pressure value. In this case the pressure transducer voltage feedback signal was incorrect and when it was converted by the PCM the value was 120kPa, less than what the actual A/C system High side pressure.

The Holden VE compressor cut off pressure is 180 kPa and the compressor cut in pressure is 240 kPa. If the ambient temperature is low the refrigerant pressure will also be low. The pressure transducer pressure value from the VE HVAC scan tool (TUNI217) indicated 145 kPa which is 35 kPa below the specified compressor cut off pressure and 95 kPa below the compressor cut in pressure. The compressor would only operate when the engine bay temperature increased, which in turn increased the A/C system pressure (thermal expansion) to above 240 kPa.

To diagnose an issue like this, use the VE HVAC scan tool (TUNI217) or similar scan tool to see what the pressure transducer calculated pressure value is and compare that value with the actual from the A/C system using a pressure gauge set.

To resolve this issue the pressure transducer was replaced and now the compressor is engaging at low ambient temperatures when the front windscreen demist mode is selected.

Another consideration would be if the refrigerant charge is low. In that case the pressure transducer and actual pressure will be the same, but the compressor will not engage because the high side pressure will be below 180 kPa.



Connect a high side pressure gauge set and the VE HVAC scan tool. Start the vehicle and engage the A/C. At idle compare the scan tool value to the actual high side pressure they should be approximately the same values. (+/- 5%)

The VT to VE pressure transducers can be installed with a full A/C system charge as the screw on port has a schrader valve to avoid any refrigerant charge escaping.