Countries:	BAHAMAS, BOLIVIA, BELIZE, CANADA, CHILE, TAIWAN, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, EL SALVADOR, TRINIDAD AND TOBAGO, UNITED STATES, URUGUAY, VENEZUELA, ARUBA, NICARAGUA, PERU, PUERTO RICO, Curaçao, GUAM, GUATEMALA, GUYANA, HAITI, HONDURAS, JAMAICA, KOREA, SOUTH KOREA, PANAMA	**Document ID:**	IK1900207
Availability:	ISIS, FleetISIS, Body Builder	**Revision:**	7
Major System:	ACCESSORIES	**Created:**	5/2/2013
Current Language:	English	**Last Modified:**	3/23/2015
Other Languages:	NONE	**Author:**	Matthew Boyer
Viewed:	17747		

Less Info

Hide Details Coding Information

Copy Link	Copy Relative Link	Bookmark	Add to Favorites	Print	Provide Feedback	Helpful	Not Helpful
		View My Bookmarks				74	29

Title: 2010 and Later ProStar and LoneStar HVAC Diagnostic Information

Applies To: 2010 and Later ProStar and LoneStar Trucks

CHANGE LOG

Dealers: Please refer to the change log text box below for recent changes to this article:

7/8/2014 - Updated troubleshooting information for DTC 2058
2/17/2015- Updated troubleshooting information for DTC SPN 2609 FMI 15
3/17/2015 - Updated Formatting

DESCRIPTION

This document addresses Air Conditioning issues on the following 2010 to 2014 vehicles with a BCM.

The following procedures will guide the user through : Common Air Conditioning failure areas, diagnostic tools, SRTs, and warranty filing.

Note: For anything Pre-2010, reference the Pre-2010 A/C HVAC Resource Center located IK1900156.

DLB SESSION

Please download and import the attached DLB session for diagnosing electrical issues:

ProStar_LoneStar_AC

FAULT CODES

Signal	B/C Pin	SPN	FMI	Description	Action
BC_RCD_PT_Temp_Signal	1600-B12	2609	15	Low Charge Protection	Check System for leak: Service Manual LEAK DETECTION be found on Page32. A/C compressor clutch will not engag is present.
BC_RCD_Pressure_Raw_Signal	1600-B12	2609	16	HVAC High Pressure Protection	HVAC Pressure Sensor Reading Above 480 PSI
Switched_5V_Sense_Raw_Signal	1602-E6	1079	1	5 volt sensor supply below normal	Short Circuit From 1602_E6 to 6201_C
RCD_HVAC_Ctrl_Head_Diag_Signal	1600-A3	3985	9	HVAC Control Head Circuit Failed To Communicate With BC	Open Circuit From 1200_A9 to 1600_A3
RCD_HVAC_Ctrl_Head_Diag_Signal	1600-A3	1552	2	HVAC Control Head Temperature Mix DM1	HVAC Temperature Door Stuck, Defective Door Actuator, or Open/ 1200_B11 to Temp Actuator Pin A, or 1200_B12 to Temp Actuator I
RCD_HVAC_Ctrl_Head_Diag_Signal	1600-A3	3981	2	HVAC Control Head Mode Fault DM1	HVAC Mode Door Stuck, Defective Door Actuator, or Open/Shortec Mode Actuator A, or 1200_B10 to Mode Actuator Pin F
RCD_HVAC_Ctrl_Head_Diag_Signal	1600-A3	3984	2	HVAC Control Head Air Inlet DM1	HVAC Air Inlet Door Stuck, Defective Door Actuator, or Open/Short to 4202_A, or 1200_B2 to 4202_F
J1939BB_Rcv_61217_058_033_Timer	N/A	2058	9/14	Rear HVAC Data Link Communication Failure	Body Builder J1939 Datalink: Loss of Communication between the I Rear HVAC Controller. Likely causes of failure: • Rear HVAC Controls not powered up or defective. • Body Controller Datalink interface is defective.

- Open J1939 Body Datalink.
- Datalink shorted to ground or shorted together.
- Datalink leads miss pinned or terminal pin backed out.

Note: Ignition key must be ON for datalink voltage tests.

1. Load test power and ground connections to the Rear HVAC C connector 5210 perform a continuity test between Pin 4 and ground. Pin 4 should be grounded with less than 1 ohm resist
2. Turn ignition switch to the ON position (do not start engine) check pin 3 which should be equal to current battery voltage If voltage is missing troubleshoot loss of HVAC power source sleeper relay 5001).
3. Check J1939 body datalink voltage at the Rear HVAC controll connector 5210 pins 15 and 16. Ignition switch must be ON. M at pin 15 (J1939+) voltage should be approx. 2.6 volts. Measu 16 (J1939-) voltage should be approx. 2.3 volts. Each voltage tenths of a volt higher or lower than those readings.
4. If the reading are in spec but the fault code remains active - e has 60 ohms resistance across it if ok go to step 9, If you get 1 an open somehwere in the datalink or you are missing one of resistors.
5. If the readings are out of spec or missing ensure the voltages wires do not match (i.e. 2.5 volts) the 2 wires may be shortec reversed. Check for harness continuity between the Rear HVA pins 15 and 16 (J1939 datalink) and the body controller conn and F6. Repair circuits if open.
6. Make sure pins are properly seated and not mis pinned. If yo harness continuity but either datalink voltage is out of spec o the resistance to ground is greater than 10K ohms. Check resi HVAC Controller connector 5210 pins 15 and 16 to ground, re greater than 10K ohms. If resistance is less than 1,000 ohms y ground.
7. Ensure proper datalink voltages are present at the body cont 1602 pins F5 and F6, if not then replace the body controller.
8. If the body controller datalink voltage is correct and the harn the fault still exist go to step 9.
9. Check datalink for any customer installed equipment and ens properly. Refer to the Body Builder Electrical Guide HERE Ger section for proper installation information. Ensure the datali reversed.
10. If there are no problems with the customer installed equipm still exists replace the Rear HVAC controller module.

Rear_HVAC_Blower_UP	N/A	3982	2	HVAC Rear Blower Speed Control Switch Error	Faulty Switch Actuator or Micro switch for HVAC Rear Blower Spee
Rear_HVAC_Temp_UP	N/A	3983	2	Rear HVAC Temperature Control Switch Error	Faulty Switch Actuator or Micro switch for Rear HVAC Temperature
HVAC Control Head Multiple Motor Faults	N/A	520465	2	HVAC Control Head Multiple Motor Faults	HVAC Motor in Wrong Position or Jammed (HVAC Control Head Mu DM1)

PARAMETERS:

Below is the list of parameters that control the operation of the HVAC system. These are how the parameters are set from the factory for proper operation.

Parameter ID	Parameter	Value	Units	Description
2562	HVAC_Compressor_HP_OFF_Time	9	Seconds	When AC Head pressure is above 400 psi, the compressor is cycled OFF for 9 for 1 second. This parameter is the OFF time
2561	HVAC_Compressor_HP_ON_Time	1	Seconds	During high pressure mode the AC Compressor is cycled OFF and ON. This p long the compressor is ON
2563	HVAC_Emergency_Shutdown_Pressure	420	PSI	Maximum AC Head Pressure allowed before emergency compressor shutdow value that will release the refrigerant into the atmosphere if the head pressure psi at the compressor.
2551	HVAC_Freeze_Probe_High_Limit	505	A2Dcounts	High limit for Freeze Probe to allow Compressor to operate
2542	HVAC_Freeze_Probe_Low_Limit	511	A2Dcounts	Low limit for Freeze Probe to allow Compressor to operate
2576	HVAC_Leave_HiPressureMode_Timeout	15	Seconds	When leaving High Pressure Mode, this is the maximum amount of time we ca pressure to drop below 300 psi before going to Normal Operation (Compresso

2548	HVAC_Max_Initial_Pressure	218	PSI	Maximum head pressure allowable when turning the compressor ON. (Transiti Compressor OFF to Normal Operation Mode)
2546	HVAC_Pressure_High_Limit	350	PSI	Maximum pressure where HVAC Compressor can operate
2556	HVAC_Pressure_Low_Limit	35	PSI	Low limit allowed to turn On Compressor

Hide Details

Feedback Information

Viewed: 17746
Helpful: 74
Not Helpful: 29

No Feedback Found