



Countries: AUSTRALIA, CANADA, UNITED STATES, MEXICO, NEW ZEALAND
Availability: ISIS, FleetISIS
Major System: ACCESSORIES
Current Language: English
Other Languages: NONE
Viewed: 98

Document ID: IK1900231
Revision: 0
Created: 9/26/2014
Last Modified: 10/3/2014
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Coding Information

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Title: Rear A/C Control Panel Inoperative

Applies To: ProStar and LoneStar

CHANGE LOG

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

10/2/2014 - Initial Article Release

DESCRIPTION

This document is supplemental to [IK1900228](#) and addresses rear A/C control panel inoperative.

SYMPTOM(s)

Rear A/C Control Panel Inoperative

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC/Light	Description
Not Applicable	

Possible Causes:

- Rear analog TEMP switch
- Rear analog BLOWER switch
- Digital controller
- Rear HVAC controller

Customer Observations or Concerns:

- Malfunction Indicator Lamp (MIL)
- No rear A/C control from sleeper
- Rear A/C not blowing cold enough
- No air flow through rear vent

SPECIAL TOOL(s) / SOFTWARE


Tool Description	Tool Number	Comments	Instructions
Diamond Logic Builder (DLB)			


[Tools Resource Center](#)


SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
Not Applicable			

DIAGNOSTIC STEP(s)

 WARNING:
To prevent property damage, personal injury, and / or death, read all safety instructions in the "Safety Information" section of the Service Manual or Diagnostic Manual.

 WARNING:
To prevent property damage, personal injury, and / or death, park vehicle on a hard, flat surface, turn engine off, set parking brake, and install wheel chocks to prevent vehicle from moving in either direction.

 WARNING:
To prevent personal injury and / or death, make sure the engine has cooled before removing components.

NOTE:
The following procedures are ONLY VALID if A/C system is fully charged and A/C system checks in IK1900228 were performed.
When a failed circuit or component is detected, repair as needed and retest for original problem.

Step	Action	Decision		
#1	Rear Control Panel:	1. Analog panel, go to Step 2.		
	<table border="1" style="width: 100%;"> <tr> <td style="background-color: green; color: black; padding: 5px;">NOTE:</td> </tr> <tr> <td>Rear HVAC control panel will either be an analog panel (mechanical switches similar to Cab A/C controls), or a digital panel with an LCD screen.</td> </tr> <tr> <td>a. Inspect rear HVAC control panel.</td> </tr> </table> <p>Which control panel does the vehicle have?</p>	NOTE:	Rear HVAC control panel will either be an analog panel (mechanical switches similar to Cab A/C controls), or a digital panel with an LCD screen.	a. Inspect rear HVAC control panel.
NOTE:				
Rear HVAC control panel will either be an analog panel (mechanical switches similar to Cab A/C controls), or a digital panel with an LCD screen.				
a. Inspect rear HVAC control panel.				

Step	Action	Decision
#2	Rear Control Panel Operation:	No. If blower speed does not function, go to Step 3.

	<p>a. Turn ignition Key-ON. b. Turn cab A/C blower control switch ON and to lowest speed. c. Access rear blend door actuator. d. Sweep rear panel temperature switch through full range while monitoring actuator collar. e. Attempt to vary blower speed with rear panel blower switch.</p> <p>Do both controls operate correctly?</p>	<p>No. If temperature control does not function, go to Step 5.</p> <hr/> <p>No. If neither control operates, perform Steps 3 - 6 in order.</p>
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Step	Action	Decision
#3	<p>Analog Switch PWR / GND:</p> <p>a. Turn ignition Key-OFF. b. Access rear analog control switch harness connector (5201). c. Turn ignition Key-ON. d. Turn dash A/C blower control switch ON to any speed. e. Measure voltage between pin-A of rear analog control switch harness connector 5201 and good ground. f. Measure voltage between pin-A and pin-C of rear analog control switch harness connector 5201.</p> <p>Do both Step 3.e and Step 3.f have B+?</p>	<p>Yes. Go to Step 4.</p>
		<p>No. Check circuit H77TZ (pin-19 rear HVAC controller to pin-C connector 5201) for open or short to ground.</p> <p>Check circuit (pin-18 rear HVAC controller to pin-A connector 5201) for open.</p> <p>Verify pin-18 of rear HVAC controller has B+ and pin-19 has ground.</p>

Step	Action	Decision
#4	<p>Analog Speed Switch Resistance:</p> <p>a. Turn ignition Key-OFF. b. Disconnect rear HVAC controller connector (5210). c. Inspect cavities 18, 19, and 23 for pushed back or damaged pins. d. Measure resistance between cavity 23 and cavity 19 of rear HVAC harness connector 5210. e. Change blower control switch through entire range and observe resistance reading.</p> <p>Does resistance vary from 0 - 10K ohms?</p>	<p>Yes. Replace rear HVAC controller.</p>
		<p>No. Replace switch.</p>

Step	Action	Decision
#5	<p>Analog Switch PWR / GND:</p> <p>a. Turn ignition Key-OFF. b. Disconnect rear temperature control switch harness connector (5202). c. Turn ignition Key-ON. d. Measure voltage between sleeper mounted temperature control switch pin-A and good ground. e. Measure voltage between sleeper mounted temperature control switch pin-A and pin-C.</p> <p>Do both Step 5.d and Step 5.e have B+?</p>	<p>Yes. Go to Step 6.</p>
		<p>No. Check circuit H77TZ (pin-19 rear HVAC controller to pin-C connector 5202) for open or short to ground.</p> <p>Check circuit (pin-18 rear HVAC controller to pin-A connector 5202) for open.</p> <p>Verify pin-18 of rear HVAC controller has B+ and pin-19 has ground.</p>

Step	Action	Decision
#6	Analog TEMP Switch Resistance: a. Turn ignition Key-OFF. b. Connect rear temperature control switch harness connector (5202). c. Disconnect rear HVAC controller connector (5210). d. Inspect cavities 18, 19, and 21 for pushed back or damaged pins. e. Measure resistance between cavity 21 and cavity 19 of rear temperature control switch harness connector 5202. f. Change temperature switch through entire range and observe resistance reading. Does resistance vary from 0 - 10K ohms?	Yes. Replace rear HVAC controller. No. Check circuit (pin-21 connector 5210 to pin-B connector 5202) for open and short to ground. If circuit is good, replace temperature switch.

Step	Action	Decision
#7	Digital Panel PWR / GND: a. Connect rear HVAC controller connector (5210). b. Disconnect HVAC LED control connector (5200). c. Turn ignition Key-ON. d. Turn dash A/C blower control switch ON to any speed. e. Measure voltage between pin-7 of HVAC LED control connector (5200) and a good ground. f. Measure voltage between pin-7 and pin-8 of HVAC LED control connector (5200) and a good ground. Do both Step 7.e and Step 7.f measure 10.5 - 13.5V?	Yes. Go to Step 8. No. Check circuit H75-GA (pin-8 connector 5200 to pin-25 connector 5210) for open or high resistance.

Step	Action	Decision
#8	Digital Panel Signals: a. Turn ignition Key-OFF. b. Connect DLB. c. Turn ignition Key-ON. d. Turn dash A/C blower control switch ON to any speed. e. "Watch" the following rear HVAC signals: <ul style="list-style-type: none"> • REAR_HVAC_AC_BLOWER_UP • REAR_HVAC_AC_BLOWER_DN • REAR_HVAC_TEMP_UP • REAR_HVAC_TEMP_DN f. Operate the following controls: <ul style="list-style-type: none"> • Blower setting: Toggle switch to raise / lower blower speed • Temperature Setting: Toggle switch to raise / lower temperature. Does DLB display a check mark in the signal box for Blower up, Blower down, Temp up, and Temp dn when the appropriate switch is toggled?	Yes. Digital panel is working correctly. No. Go to Step 9.

Step	Action
#9	Digital Panel Circuits: Check individual circuits from digital controller connector (5200) to rear HVAC controller connector (5210) for continuity. Repair any shorted to ground or open circuits. If any circuits are good but are not checked, replace digital control panel.

REPAIR STEP(s)

Not Applicable

REMOVAL PROCEDURE:

Not Applicable

INSTALLATION PROCEDURE:

Not Applicable

WARRANTY INFORMATION**Warranty Claim Coding:**

Group:	19030 - Auxiliary No-Idle HVAC
Noun:	638 - Electric HVAC Module

Standard Repair Time(s):

Step	Description	Chassis	Engine	SRT	Hours
3	Analog Switch PWR / GND	ProStar/LoneStar	All	T-Time	0.2 hr
4	Analog Speed Switch Resistance	ProStar/LoneStar	All	T-Time	0.1 hr
5	Analog Switch PWR / GND	ProStar/LoneStar	All	T-Time	0.2 hr
6	Analog TEMP Switch Resistance	ProStar/LoneStar	All	T-Time	0.1 hr
7	Digital Panel PWR / GND	ProStar/LoneStar	All	T-Time	0.3 hr
8	Digital Panel Signals	ProStar/LoneStar	All	T-Time	0.2 hr
9	Digital Panel Circuits	ProStar/LoneStar	All	T-Time	0.2 hr

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