SB-10051652-6967

Countries:	CANADA, UNITED STATES, MEXICO	**Document ID**:	IK0800415
Availability:	ISIS, Bus ISIS, FleetISIS	**Revision**:	0
Major System:	ELECTRICAL SYSTEM	**Created**:	1/29/2013
Current Language:	English	**Last Modified**:	1/30/2013
Other Languages:	NONE	**Author**:	Charles Schroeder
Viewed:	64		

Less Info

Hide Details Coding Information

Copy Link	Copy Relative Link	Bookmark	Add to Favorites	Print	Provide Feedback	Helpful	Not Helpful
		View My Bookmarks				1	0

Title: **Turn Signal Troubleshooting for 2007 and newer HPV, ProStar and Lonestar**

Applies To: **ProStar, LoneStar, All HPV**

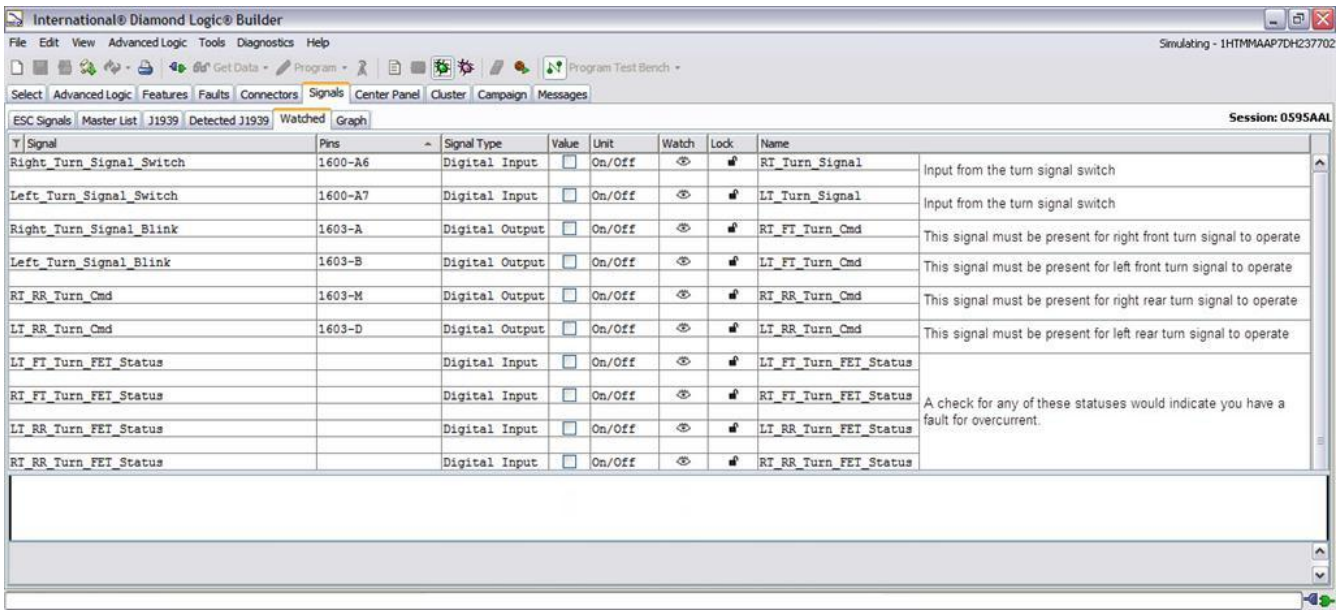
DESCRIPTION

This system utilizes the Body Controller (BC) to illuminate the turn signal lamps and hazard flashers. Turn signal and hazard activation is accomplished using switched inputs sent directly to the BC. As the BC monitors the turn signal switch inputs, it will also provide direct control of the turn and hazard lamp output circuits. Therefore, conventional mechanical type flasher units are not necessary. The BC contains software parameters that provide for a circuit output cycling timer, which will control flashing of the turn signal and hazard lamps. Flashing of the individual lamps are timer controlled and maintains a cycle rate of 90 times per minute anytime a turn or hazard switch request signal is received. The software timer is activated anytime the turn signal lamps or hazards are to be illuminated, and will provide a timed ON/OFF output cycle which is used to illuminate and extinguish the individual turn signals or hazard lights.

SYMPTOMS

- Turn signal lights inop

SIGNALS TO WATCH



Signal	Pins	Signal Type	Value	Unit	Watch	Lock	Name	
Right_Turn_Signal_Switch	1600-A6	Digital Input		On/Off			RT_Turn_Signal	Input from the turn signal switch
Left_Turn_Signal_Switch	1600-A7	Digital Input		On/Off			LT_Turn_Signal	Input from the turn signal switch
Right_Turn_Signal_Blink	1603-A	Digital Output		On/Off			RT_FT_Turn_Cmd	This signal must be present for right front turn signal to operate
Left_Turn_Signal_Blink	1603-B	Digital Output		On/Off			LT_FT_Turn_Cmd	This signal must be present for left front turn signal to operate
RT_RR_Turn_Cmd	1603-M	Digital Output		On/Off			RT_RR_Turn_Cmd	This signal must be present for right rear turn signal to operate
LT_RR_Turn_Cmd	1603-D	Digital Output		On/Off			LT_RR_Turn_Cmd	This signal must be present for left rear turn signal to operate
LT_FT_Turn_FET_Status		Digital Input		On/Off			LT_FT_Turn_FET_Status	A check for any of these statuses would indicate you have a fault for overcurrent.
RT_FT_Turn_FET_Status		Digital Input		On/Off			RT_FT_Turn_FET_Status	
LT_RR_Turn_FET_Status		Digital Input		On/Off			LT_RR_Turn_FET_Status	
RT_RR_Turn_FET_Status		Digital Input		On/Off			RT_RR_Turn_FET_Status	

TROUBLESHOOTING

1. The first step is to check and record the DTC's using DLB, not the cluster. For information on doing this properly see IK2600036

2. Make sure that the Body Controller is powered up properly. For information on this follow IK0800092

NOTE: Always refer to the Service Portal for the most accurate wiring schematics by Model and Build Date.

Signal	B/C Pin	SPN	FMI	Description	Action

Right_Turn_Signal_Blink	1603-A	2370	5	Right Front Turn Signal Lamp Undercurrent	Open circuit from 1603-A to turn signal lamps, or an open ground circuit.
Right_Turn_Signal_Blink	1603-A	2370	6	Right Front Turn Signal Lamp Overcurrent	Shorted circuit from 1603-A to turn signal lamps, or a poor ground circuit.
Left_Turn_Signal_Blink	1603-B	2368	5	Left Front Turn Signal Lamp Undercurrent	Open circuit from 1603-B to turn signal lamps, or an open ground circuit.
Left_Turn_Signal_Blink	1603-B	2368	6	Left Front Turn Signal Lamp Overcurrent	Shorted circuit from 1603-B to turn signal lamps, or a poor ground circuit.
RT_RR_Turn_Cmd	1603-M	2374	5	Right Rear Turn Signal Lamp Undercurrent	Open circuit from 1603-M to turn signal lamps, or an open ground circuit.
RT_RR_Turn_Cmd	1603-M	2374	6	Right Rear Turn Signal Lamp Overcurrent	Shorted circuit from 1603-M to turn signal lamps, or a poor ground circuit.
LT_RR_Turn_Cmd	1603-D	2372	5	Left Rear Turn Signal Lamp Undercurrent	Open circuit 1603-D to turn signal lamps, or an open ground circuit.
LT_RR_Turn_Cmd	1603-D	2372	6	Left Rear Turn Signal Lamp Overcurrent	Shorted circuit from 1603-D to turn signal lamps, or a poor ground circuit.

3. If codes are present, follow the troubleshooting listed above. Clicking on the description of the fault will show the circuits that are related to that output.

4. If *no* codes are present, verify the inputs from the turn signal switch to the Body Controller are present. Values shown below are measured with a breakout box installed.

B/C Pins	Key off voltage	Key on voltage	Right turn signal on	Left turn signal on	Hazards on
1600-A6	5v +/- 0.5v	10v +/- 1v	0v (Check mark present in DLB)	5v key off / 10v key on	0v (Check mark present in DLB)
1600-A7	5v +/- 0.5v	10v +/- 1v	5v key off / 10v key on	0v (Check mark present in DLB)	0v (Check mark present in DLB)

5. Unplug the 1603 connector. Verify all terminals are seated properly, and that they are not spread causing a loose connection.

6. Hook up the breakout box to the 1603 connector to the Body Controller only. Leave the truck light harness disconnected from the breakout box harness.

- Verify the Body Controller output is present at the breakout box, with the truck light harness disconnected from breakout box harness.
- If no output is present, inputs are correct, and the Body Controller has proper power and ground, suspect failed Body Controller output
- If output is present, proceed to checking the wiring.

CIRCUIT DIAGRAMS

- Turn Signal Input Circuit Diagram

Hide Details

Feedback Information

Viewed: 63
Helpful: 1
Not Helpful: 0

No Feedback Found