Countries:	AUSTRALIA, BRAZIL, CANADA, COLOMBIA, UNITED STATES, PUERTO RICO, SOUTH AFRICA	**Document ID**:	IK1300015
Availability:	ISIS, FleetISIS	**Revision**:	5
Major System:	TRANSMISSION	**Created**:	11/21/2006
Current Language:	English	**Last Modified**:	4/29/2014
Other Languages:	Français, Español,	**Author**:	Matthew Boyer
Viewed:	4252		

Title: Shift Lever Interlock Solenoid for the Allison Transmission Won't Unlock with Brake Pedal Depressed

Applies To: All with Allison 2000 series transmission with parking pawl

NORMAL OPERATION

The Interlock for Shifter with Park Position feature is controlled by the presence of the ignition signal, accessory signal, the service brake applied signal, the transmission in park signal, and if required, the wheelchair lift door switch signal (door closed). The ESC will ground the Park_Position_Unlock_Soleniod signal when **all** of the above ESC signals are present to energize the lock solenoid to unlock the shifter. Park_Position_Unlock_Soleniod is mapped to pin 6 of connector 1600 on MD and connector 1602 pin 25 on Bus.

FAILSAFE OPERATION

If a 639-14A-5-240 code, loss of communication from the transmission ECU, or a 612-14A-1-1 or 612-14A-1-2 code, brake switch out of range low or high, is active the ESC will also ground pin 6 of the 1600 connector energizing the solenoid.

TROUBLESHOOTING

1. Turn on the ignition and apply the park brake. If the Park light illuminates in the EGC the ignition signal is present.

2. Turn on the windshield wipers. If the windshield wipers operate the accessory signal is present.

3. Depress the brake pedal. If the brake lights illuminate the brake switch applied signal is present.

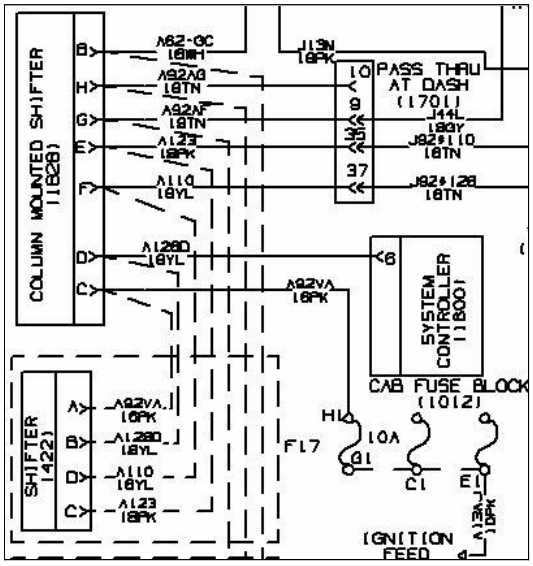
4. Turn on the ignition and place the transmission in Park. Check the PRDNL display in the EGC. If an underscore is under the P the transmission park signal is present.

5. With the ignition on unplug the brake light switch or switches to get an active 612-14A-1-1 code. The shift solenoid will unlock if the solenoid and the wiring for the solenoid are ok.

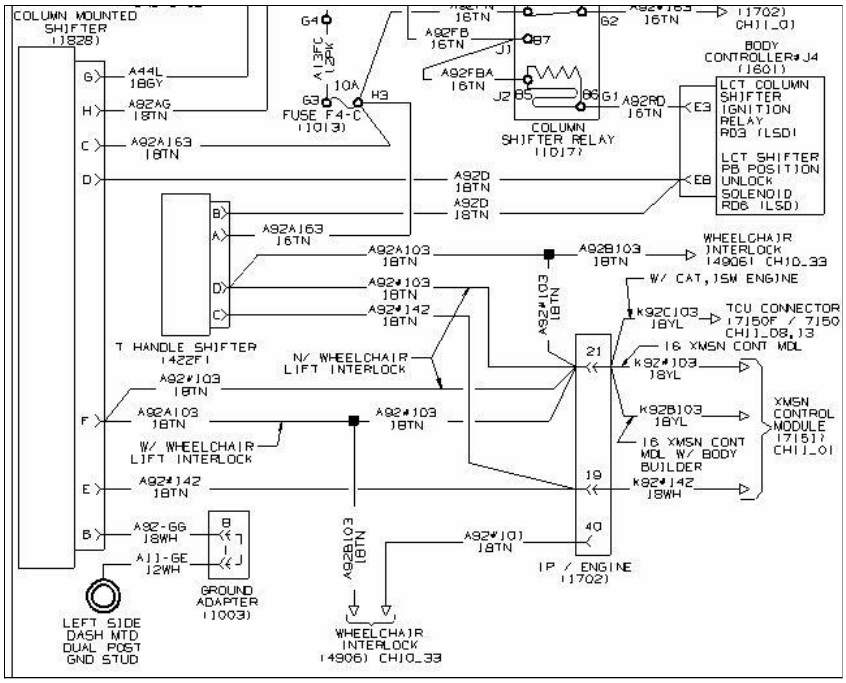
6. Bus only Check the status of the Bus_wheelchair_lift_door_input signal in DLB. The status must be 1 for the lift door closed if the bus is equipped with this interlock feature.

CIRCUIT DIAGRAMS

Pre-2008 Models - Pins C and D at the shifter are the power and ground for the shift interlock solenoid in the diagram below.

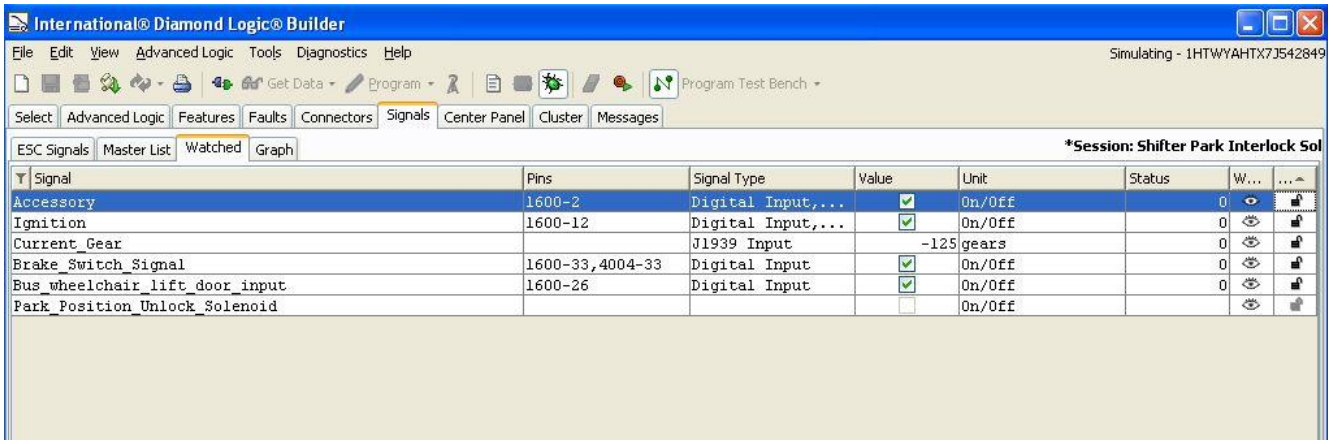


Post-2008 Models - The Body Controller provides a ground to the interlock solenoid on pin E8 of the J4 (1601) connector.

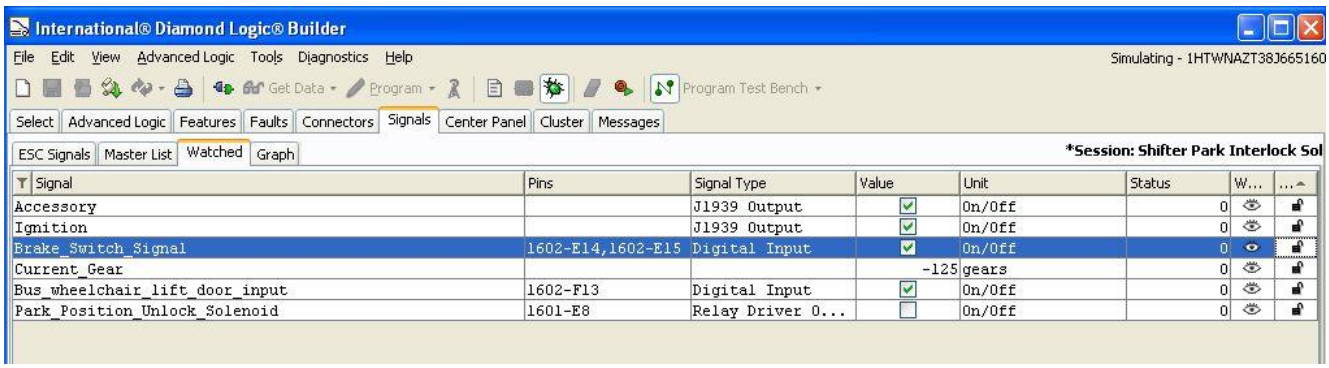


SIGNALS TO WATCH

Pre-2008 Signals



Post-2008 Signals



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