



Countries: CANADA, UNITED STATES
Availability: ISIS, FleetISIS
Major System: BRAKES
Current Language: English
Other Languages: NONE
Viewed: 4605

Document ID: IK0400019
Revision: 1
Created: 4/9/2007
Last Modified: 11/2/2012
Author: Rob Marvel

[Less Info](#)

Hide Details

Coding Information

Copy Link 	Copy Relative Link 	Bookmark View My Bookmarks	Add to Favorites 	Print 	Provide Feedback 	Helpful 1061	Not Helpful 874
----------------------	-------------------------------	--	-----------------------------	------------------	-----------------------------	----------------------------	-------------------------------

Title: Air Powered (SAAR) Park Brake Troubleshooting (Service "P" Light Coming on)

Applies To: All HPV with Air Powered Park Brake (SAAR)

DESCRIPTION

The SAAR parking brake is an air powered parking brake for hydraulic brake vehicles. Unlike the hydraulic powered parking brake (SAHR) used on school buses, the air SAAR parking brake is controlled by the ESC.

SIGNALS TO WATCH

The screenshot shows the 'Signals' tab in the International Diamond Logic Builder software. The window title is 'International® Diamond Logic® Builder' and it is in 'Simulating' mode for file '1HTWYAHTX7J542849'. The 'Signals' tab is active, showing a list of signals to watch. The status bar at the bottom indicates 'Simulator running at roughly 86.53% of real time' and '14.80 estimated seconds elapsed'.

Signal	Pins	Signal Type	Value	Unit	Status	Watch	L...
Ignition	1600-12	Digital Input, J1939...	<input checked="" type="checkbox"/>	On/Off	0	<input checked="" type="checkbox"/>	
Accessory	1600-2	Digital Input, J1939...	<input checked="" type="checkbox"/>	On/Off	0	<input checked="" type="checkbox"/>	
Park_Brake_SAAR_Travel_Signal	4004-16	Digital Input	<input checked="" type="checkbox"/>	On/Off	0	<input checked="" type="checkbox"/>	
Park_Brake_Switch_Signal	1600-32	Digital Input	<input checked="" type="checkbox"/>	On/Off	0	<input checked="" type="checkbox"/>	
Service_Park_Brake_Ind_Cmd		J1939 Output	<input type="checkbox"/>	On/Off	0	<input checked="" type="checkbox"/>	
Persis_Serv_Park_Brake			<input type="checkbox"/>	On/Off	0	<input checked="" type="checkbox"/>	

TROUBLESHOOTING

NOTE: On the Pre-2007 trucks with ESC's, the Service P light would go out whenever the DTC went inactive. On the Post-2007 trucks with Body Controllers(BC), the Service P light will stay on even after the code goes inactive. So in order to get the light to go out, you need to clear all inactive codes.

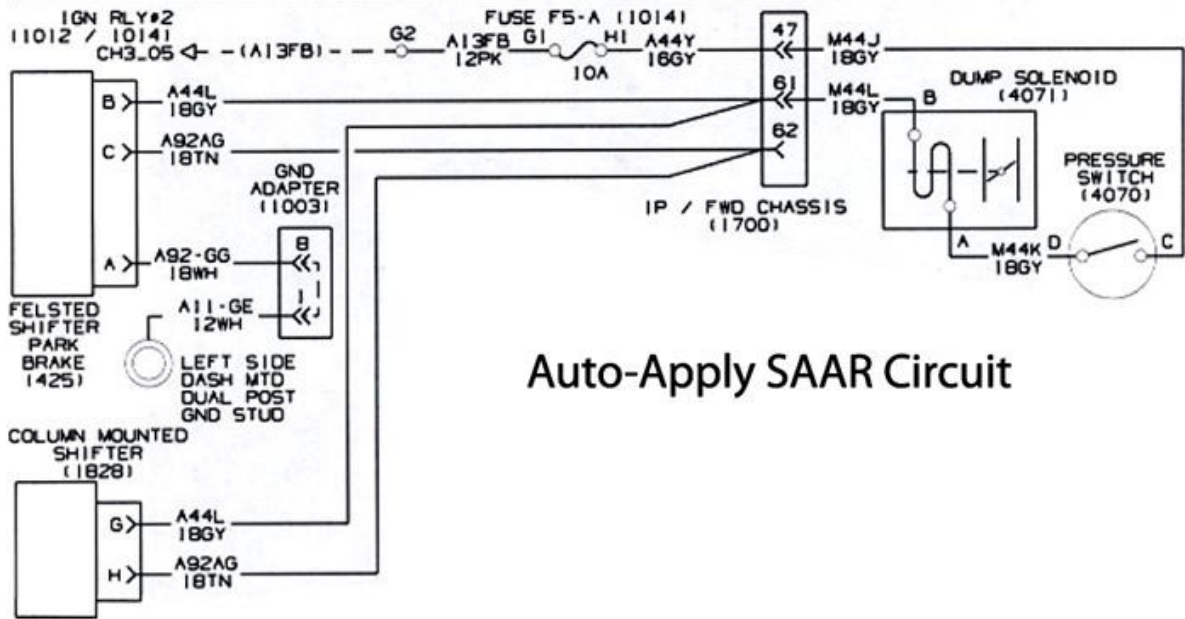
1. Is this a problem with the auto-apply only? The auto-apply portion of this parking brake is hard wired and has nothing to do with the ESC or BC. There is a switch in the shifter that grounds a solenoid which dumps the air out of the SAAR can, allowing the spring to apply the park brake. See the circuit diagrams below.
2. Does the parking brake actually work? Does it apply and release with the switch? If the parking brake is actually working with the switch, that tells you that the mechanical and air part of the system is working properly and you have an electrical problem.
3. Monitor the [Park_Brake_SAAR_Travel_Signal](#) and [Park_Brake_Switch_Signal](#) in DLB. If the Service P light is coming on, it's because these 2 signals do not agree. You need to figure out which one is wrong and then troubleshoot that circuit.

CIRCUIT DIAGRAMS

- For Travel Switch wiring on pre-2007 [click here](#)
- For Travel Switch wiring on post-2007 [click here](#)
- For electrical circuit diagrams on pre-2007 [click here](#)
- For electrical circuit diagrams on post-2007 [click here](#)

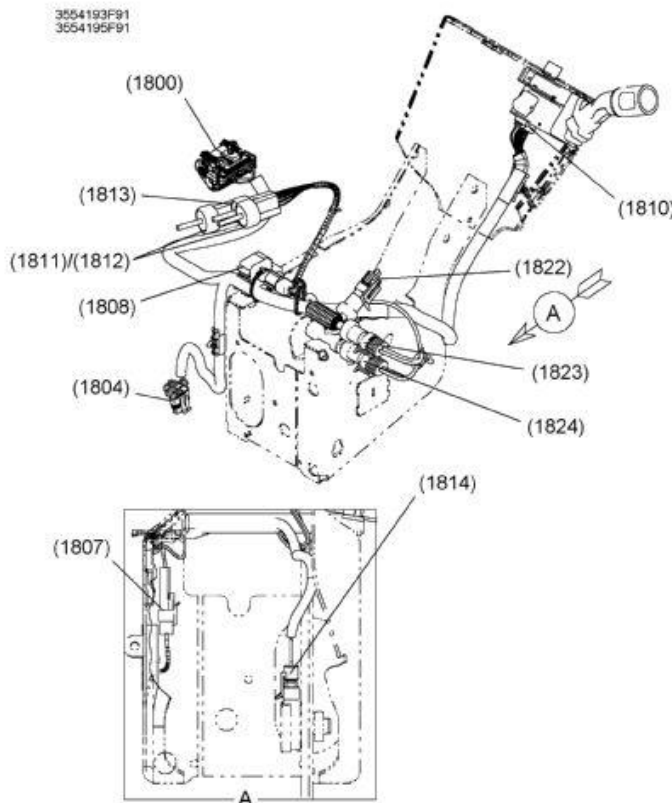
The diagram pictured here, only shows the Auto-apply portion of the park brake wiring. Not all trucks with air powered park brakes have this feature.

INTERNATIONAL TRUCK AND ENGINE CORPORATION | ELECTRICAL CIRCUIT DIAGRAM | CHAPTER 11
 THIS PRINT IS PROVIDED ON A RESTRICTED BASIS AND IS NOT TO BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF INTERNATIONAL TRUCK AND ENGINE CORPORATION. | ALLISON GEN 4 1 / 2000 TRANSMISSION W/ 16. W/ CAT AND W/ 15M ENGINE



Auto-Apply SAAR Circuit

COMPONENT LOCATIONS



Air Park Brake Switch Location (Steering Column Support View)

(1813) PARK INDICATION PRESSURE SWITCH
(1800) DRIVER CONTROL MODULE (DCM) CONNECTOR

For more component locations, [click here](#).

 Hide Details

Feedback Information

Viewed: 4604
Helpful: 1061
Not Helpful: 874

No Feedback Found

Copyright © 2012 Navistar, Inc.