VOLVO
Volvo Trucks North America, Inc.
Greensboro, NC USA

Service Bulletin Trucks

Parking Brake Alarm
VN, VHD
From build dates 03.2001 to 09.2001

Parking Brake Alarm

The following service information details the Parking Brake Alarm for the VN, VHD vehicles.

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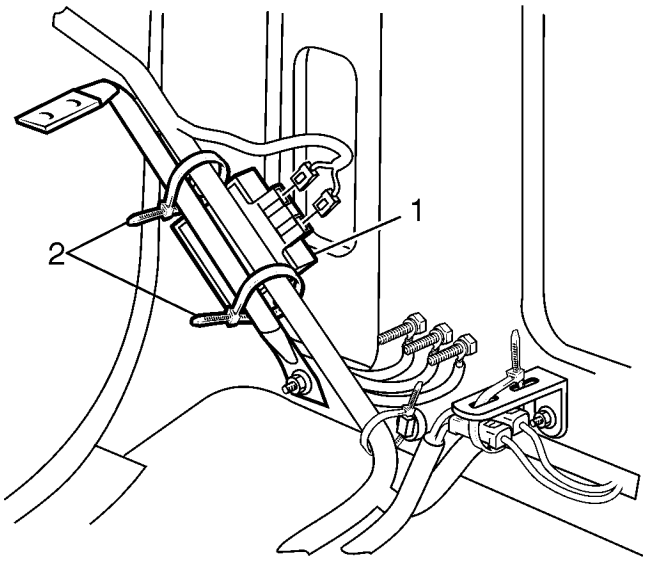
Note: Information is subject to change without notice.
Illustrations are used for reference only and may differ slightly from the actual vehicle being serviced. However, key components addressed in this information are represented as accurately as possible.

Parking Brake Alarm



W3005002

Module Location: Passenger side, under the dash next to the climate unit.

1 Parking Brake Alarm
2 Cable tie

The Parking Brake Alarm is designed to monitor certain vehicle inputs (vehicle road speed, park brake and data link). The purpose of this module is to monitor these functions and give the driver an alert tone if he has not released the park brake when the vehicle is in motion. This unit is designed to give audible warning tones when these inputs are missing or the data received is invalid/incorrect.

WARNING

Continuing to drive a vehicle with the park brake applied will cause serious brake/vehicle damage, wheel end fires, or injury to the driver and others.

There are three distinct modes of operation and up to four levels of audible alert tones.

Ignition On Mode

(Power On/OK = 3 short bells)
(Warning 1 = 5 sharp quick bells)
(Warning 2 = (2x) Warning 1)

In this mode the module will sound a brief bell tone 2 seconds after the key switch is turned on. This one time pattern of tones is an indication of a properly functioning module and should go silent if the park brake is applied.

If a park brake or vehicle speed message is not received (due to data link connection being faulty or other causes) the module will activate (Warning1) once after the Power OK signal.

If the park brake is seen as released or there is an open circuit from the park brake to the module, (Warning 2) is activated once after the Power OK signal.

Driving Mode

The module enters the Driving mode after activating the Power On tone and or the Warning 1 or 2 tones according to prerequisites.

Note: While in Ignition Mode and Driving Mode the alert tones will be a one time event which are sequenced only once, except for the Alarm tone which is repeated continuously.

The module will continuously monitor the vehicle speed and park brake inputs after the vehicle is moving and also while it is stopped and the ignition is on.

Note: If park brake is seen as being released while vehicle speed is greater than 6.4 kph (4 mph), no tones are activated and the module is functioning properly.

Alarm Mode

(Alarm tone = 5 quick bells + 5 quick bells + continuously repeated)

The module will give a continuous audible alarm if the following occurs:

- Park brake applied while vehicle speed is greater than 6.4 kph (4 mph))

Note: If the park brake is immediately released, the alarm should go silent. If the alarm does not go silent, then a failed circuit exists for the park brake switch status.

Parking Brake Alarm, Troubleshooting

Prerequisites:

- Parking brake module disconnected
- Ignition switch ON
- Digital multimeter measuring Voltage (V) or Resistance (Ω)
- Measurement at connector

Terminal	Signal Type	Measurement Points	Nominal Value	Comments
C1–1	Ignition	C1-1 to C1-4	V = Ubat	Check Fuse (F 1) for being blown - replace fuse. Otherwise check wiring for being faulty
C1-2	Data link + (J1587/J1708)	C1-2 to alternate ground	V = 0 - 5V	If no voltage is detected, then check for fault codes relating to J1587/J1708 datalink failure. Also see, ”Data Links, Fault Tracing” Service Bulletin, Group 34.
C1-3	Data link - (J1587/J1708)	C1-3 to alternate ground	V = 0 - 5V	If no voltage is detected, then check for fault codes relating to J1587/J1708 datalink failure. Also see, ”Data Links, Fault Tracing” Service Bulletin, Group 34
C1-4	Ground	C1-4 to alternate ground	Approximate = 0 Ω	If ground measurement is incorrect. Recheck using a different ground or repair circuit wiring.
C2-1	Not connected			
C2-2	Park brake	C2-2 to alternate ground	Park brake ON = 0 Ω Park brake OFF = ∞Ω	Cummins and Detroit engines only. If measurements are not correct then either a faulty park brake switch exists or a bad connection to ground. Check schematics for proper vehicle wiring diagram.
C2-3	Not connected			
C2-4	Not connected			

Alternate testing: (Volvo engine) Certain tests in VCADs Pro can provide help in checking several requirements of the parking brake module, i.e. - Vehicle speed, Park brake status.
(Vendor engine) On vendor engines these items may be checked by using the engine manufacturers software.

Note: If all of the above checks are performed and are in order, then a replacement of the module is required.