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2 Low Unloc Differential Kit

Front Axle Disconnect Kit for 2WD Low Range Operation

1030705

**RAM 1500 2009-2018 4x4 (All engines)
RAM 2500 2014-2018 4x4 (All engines)
RAM 3500 2013-2018 4x4 (All engines)**

NOTE

This kit also works on 2013-2018 3500 Cab/Chassis models.
This kit is not applicable to RAM 4500/5500 models.

This kit is for both automatic and manual transfer case trucks.

BD Engine Brake Inc.

Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2

U.S. Shipping Address: 88-446 Harrison St, Sumas, WA 98295 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295

Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bd-power.com

Kit Contents

1300705	1300910	1210347
		
Wiring Harness Qty: 1	Rocker Switch Qty: 1	Relays Qty: 2

1300131	1003335
	
Tie Wrap (Medium) Qty: 6	Switch Decal Qty: 1

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Introduction

Vehicle maneuverability is reduced when 4WD modes are engaged as the front and rear axles are directly connected through the transfer case. This makes it very difficult to use the vehicle in low range except in straight lines or slippery conditions.

The BD 2 Low Unloc Differential Kit allows the operator to disable the front wheel drive mechanism by not allowing the differential to engage the front axle. By keeping this disengaged, full torque is available to the rear wheels. This also allows for sharp “All the way over” turns without the front axle hopping or binding.

When the 2 Low Unloc is turned on, the front wheels will NOT be driven. This allows for normal two wheel drive maneuverability while in low range. This is very helpful for backing up trailers, and other special maneuvers.

Operation

The 2 Low Unloc is controlled using a rocker switch mounted on or below the dash. When the switch is in the off position, the truck operates normally and will lock the front axle when in 4WD. When the switch is turned on, this will disable the engagement of the front axle lock, only allowing 2WD operation.

To access 2WD low range, turn the rocker switch on *first*. Then, move the transfer case selector or lever to 4WD low range. The rocker switch will now light up showing that it is disabling the front axle lock and the truck will be able to operate in low range 2WD.

IMPORTANT Engage the 2 Low Unloc *before* switching the transfer case to 4WD. Do not engage or disengage the axle lock while the transfer case is in 4WD mode. The load put on the front axle from the transfer case when in 4WD will not allow the front axle locking mechanism to engage or disengage correctly.

NOTE Do not leave this unlock device enabled in 4x4 high range as this will cause the front drive shaft and differential to be driven without doing any work. This will reduce fuel economy and create unnecessary driveline drag.

Tools Required for Installation

- Trim removal tool
- Small file
- Stepped drill bit with drill

Note If the switch is not being permanently mounted, this kit can be installed with only a trim removal tool.

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Installation

Remove the key from the ignition and wait two minutes before beginning installation to ensure no fault codes are set from unplugging the drivetrain control module.

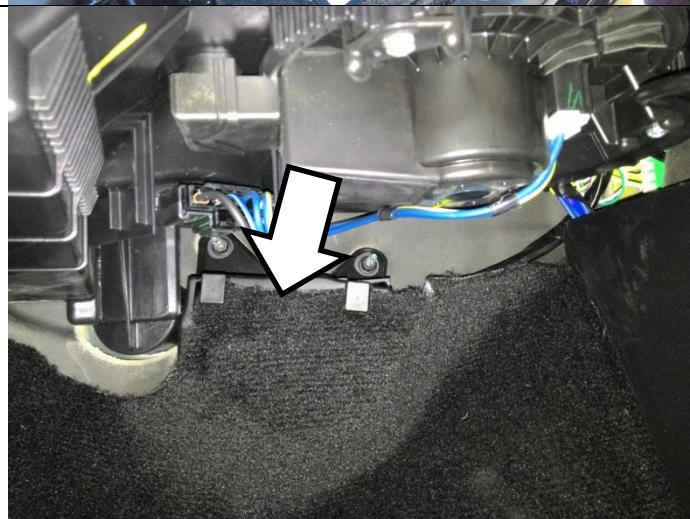
Remove the carpeted panel below the glove box on the passenger side of the vehicle by removing the three push in retainers.



Disconnect the small wire for the under dash LED by pushing in on the tab to release it. Move this panel out of the way.



Pull the carpet back to expose the plastic cover protecting the drivetrain control module.



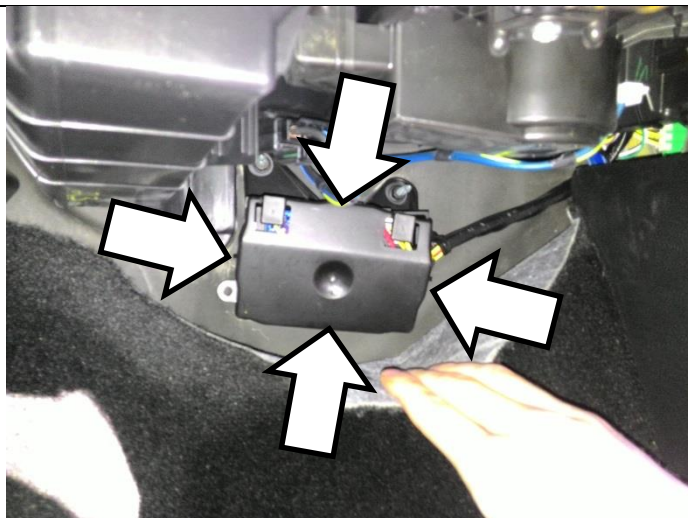
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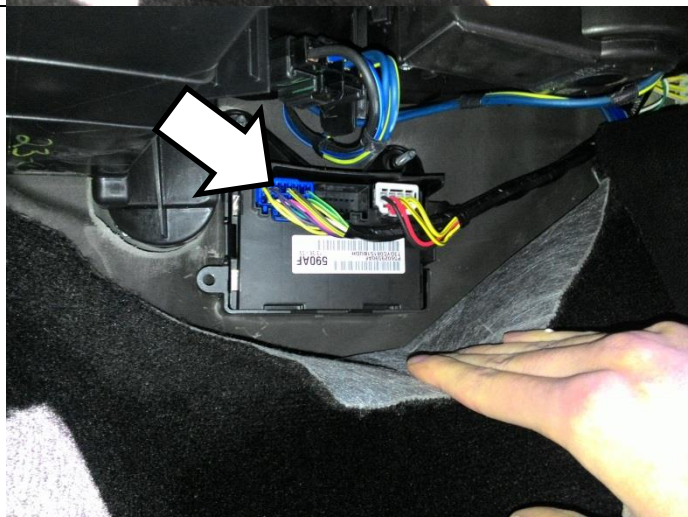
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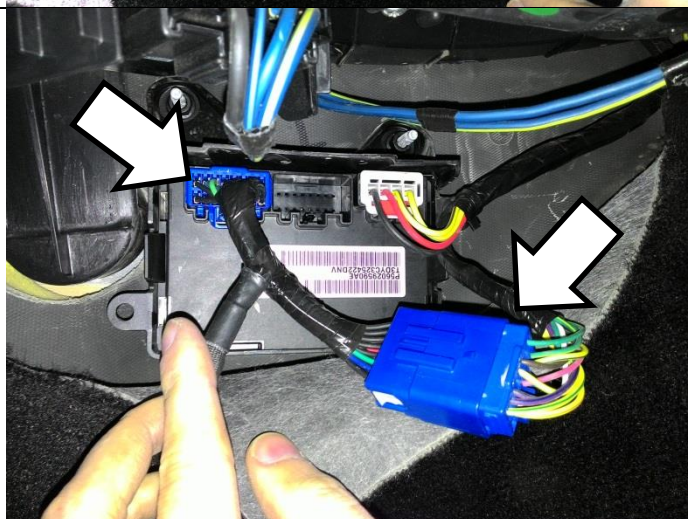
Unclip the plastic cover to expose the drivetrain control module. (4 clips)



Disconnect the blue connector on the control module.

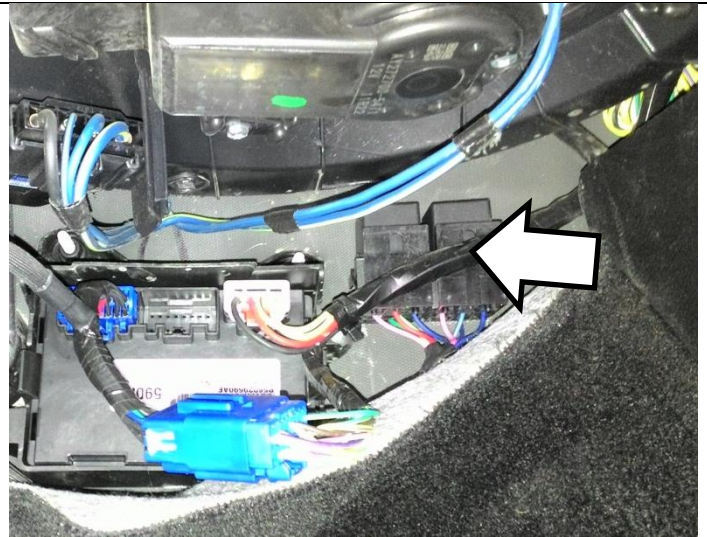


Plug the supplied BD harness into the control module and connect to the existing blue connector so that the BD harness is connected inline.



Install the two supplied relays into the BD wiring harness.

Using the supplied wire ties, secure the relays nearby. These may be tied to the existing wiring harness. Tuck the wires behind the carpet.



Route the remaining length of wires from the BD harness toward the driver's side or to the desired switch location.

Note The wire can be tucked under the carpet if desired or run under the center console (if equipped).



Locate a spot to mount the switch. This may be below the 4wd switch or left to the drivers preference.

Check there are no modules or wiring behind the desired mounting location and that the switch body and wires will fit.



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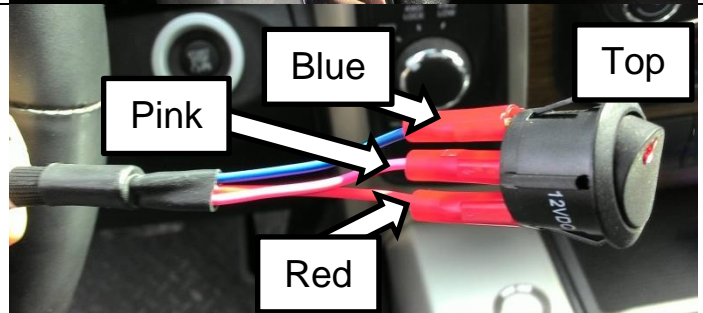
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Using the stepper drill bit, create a hole to mount the switch. Use the small file to create a notch to locate the switch. The supplied decal may be used as a template.

Apply the supplied "2WD LOW" sticker over the hole before installing the switch.

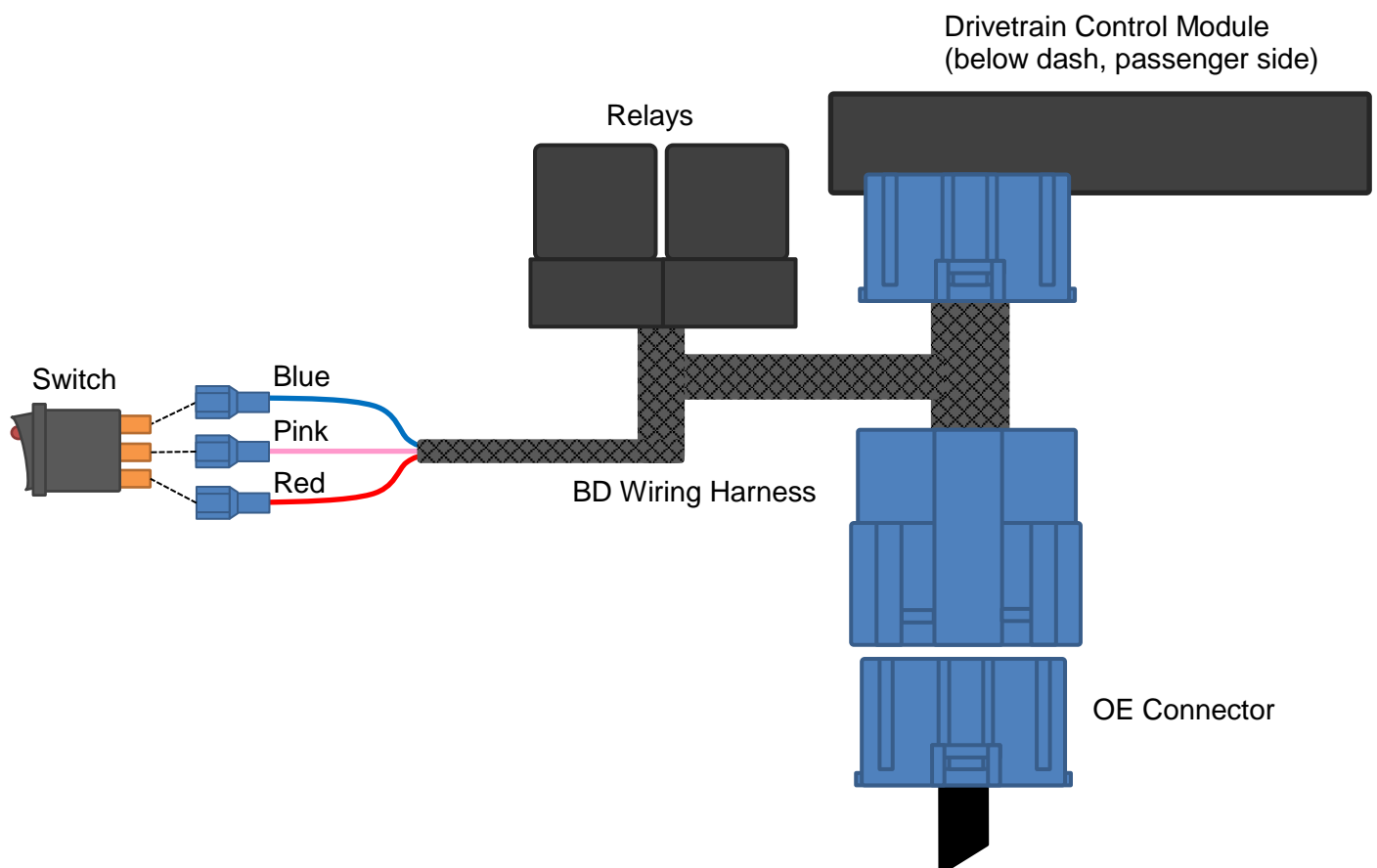


Once the switch is installed, connect the three spade terminals to the switch in the order shown.



Reinstall the drivetrain control module plastic cover, the carpet, under dash panel and any other panels removed for installing the switch.

Wiring Diagram



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Other Switch Options

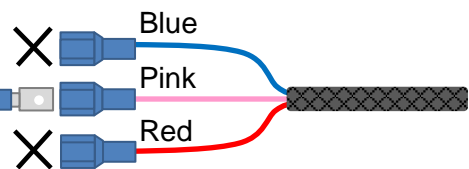
The rocker switch in this kit may be replaced with another switched 12v power source if desired. To enable the 2WD Low Unlock, feed power to the pink wire. If using one of the factory up-fitter AUX switches, connect this wire to the appropriate output (normally located in the engine bay above the brake booster). If using a customer supplied switch, connect both the red and pink wires to the switch to enable the 2WD Low Unlock. If the switch has an illumination feature, connect the blue wire (this is a switched ground). See diagrams below.

Up-fitter AUX Switches



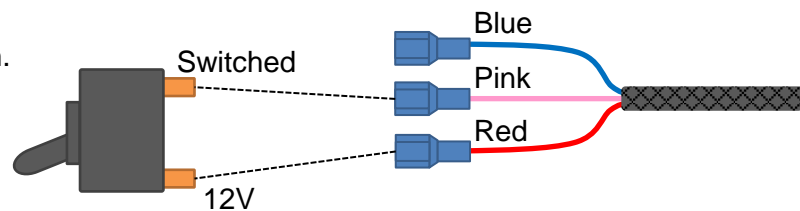
To AUX output
(under-hood)

Tape off Blue and Red wires



Customer Supplied Switch

Blue wire may be attached to illumination terminal on switch. It is a switched ground. If unused, tape it off.



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