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Ford High Idle Kit

1036612	2017-2022 Ford F250/F350/F450/F550/F600 6.7L Diesel
1036613	2023+ Ford F250/F350/F450/F550/F600 6.7L Diesel/6.8L, 7.3L Gasoline
1036616	2017-2022 Ford F250/F350/F450/F550/F600 6.2L, 6.8L, 7.3L Gasoline

For 2016+ F650/F750 see BD part number 1036610

PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

BD Engine Brake Inc.
1-800-887-5030 | https://www.bddiesel.com

Tools Required

- 1/16” Allen Key
- 1/8” and 9/32” Drill Bit (optional)
- Trim Panel Tools (optional)
- Long Screwdriver (optional)

Kit Contents

103661x Kit Contents		
1306613	**1300133**	**1003331**
Control Module	Tie Wrap (Short)	High Idle Sticker
Qty: 1	**Qty: 6**	**Qty: 1**

2000109	**1330052**
Bracket	Screw
Qty: 1	**Qty: 2**

1036612	**1036613**	**1036616**
1306618	**1306619**	**1306620**
Wire Harness	Wire Harness	Wire Harness
Qty: 1	**Qty: 1**	**Qty: 1**

High Idle Kit Information

This high idle kit allows the user to control the engine RPM while stationary by interfacing with the SEIC wiring found in Ford Super Duty trucks. This wiring harness has a plug-in connector for quick connection to the factory wiring.

The operator may idle the engine anywhere between 900-3000RPM for diesel models and 800-2400RPM for gasoline models.

This kit is great for faster warm-ups, extended idling, maintaining battery voltage under high electrical demands, or running power take-off equipment such as hydraulic pumps, compressors, and generators.

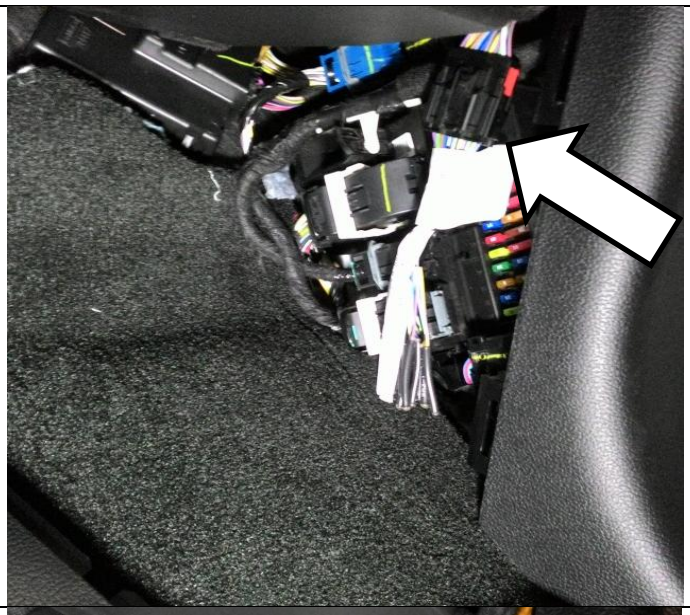
Installation Instructions

Locate the fuse box behind the passenger side kick panel (below the glove box).

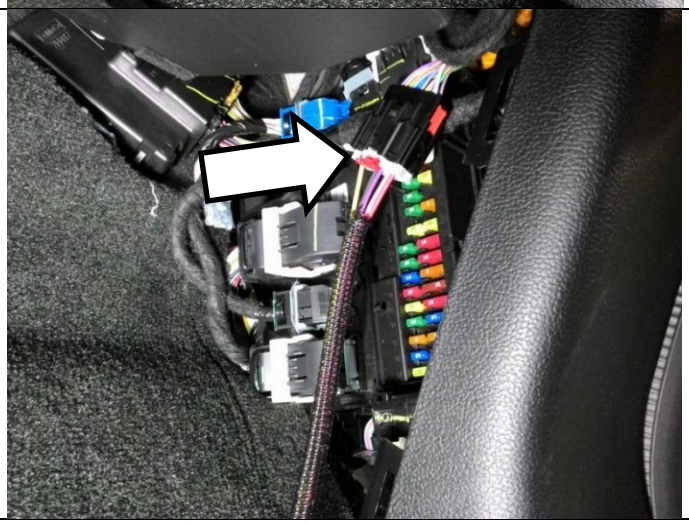
Pull off the access panel cover as shown.

2017-2022 Connector Location

Locate and disconnect the OEM up-fitter wire pigtail. This pigtail will not be used, so it may be left in the glove box or tucked back in the fuse box area.



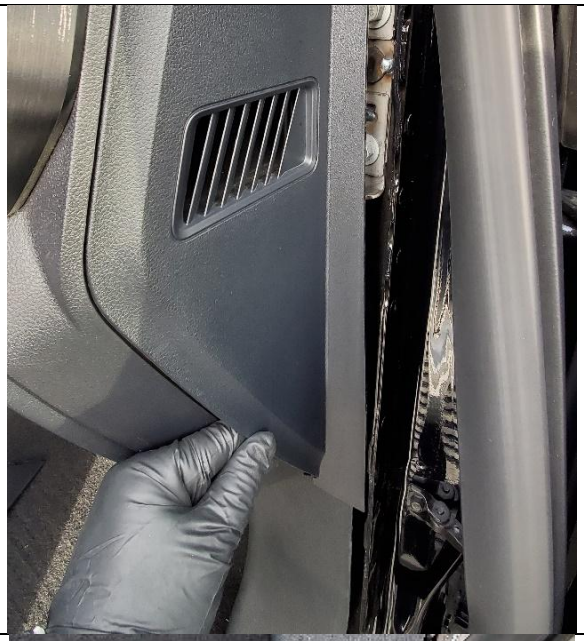
Plug in the 2017-2022 BD High Idle wiring harness to this connector.



2023+ Connector Location

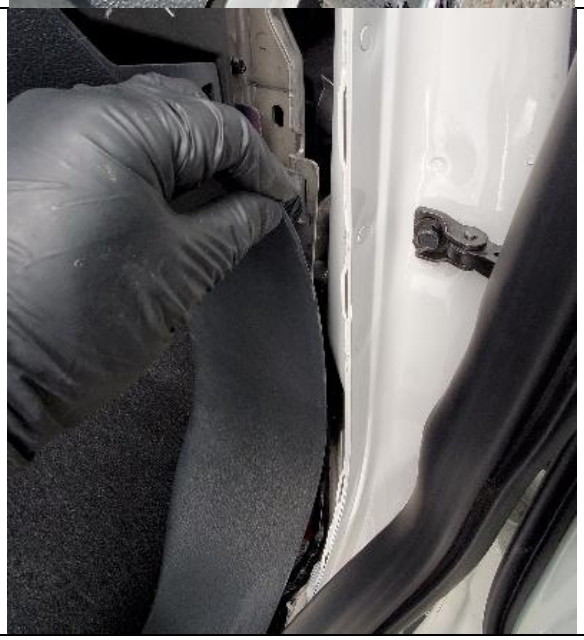
Peel off the rubber weather-stripping on the front passenger side door, just enough so that the panels can be removed.

Remove the dashboard side panel by gently pulling the panel, starting from the bottom and working up.



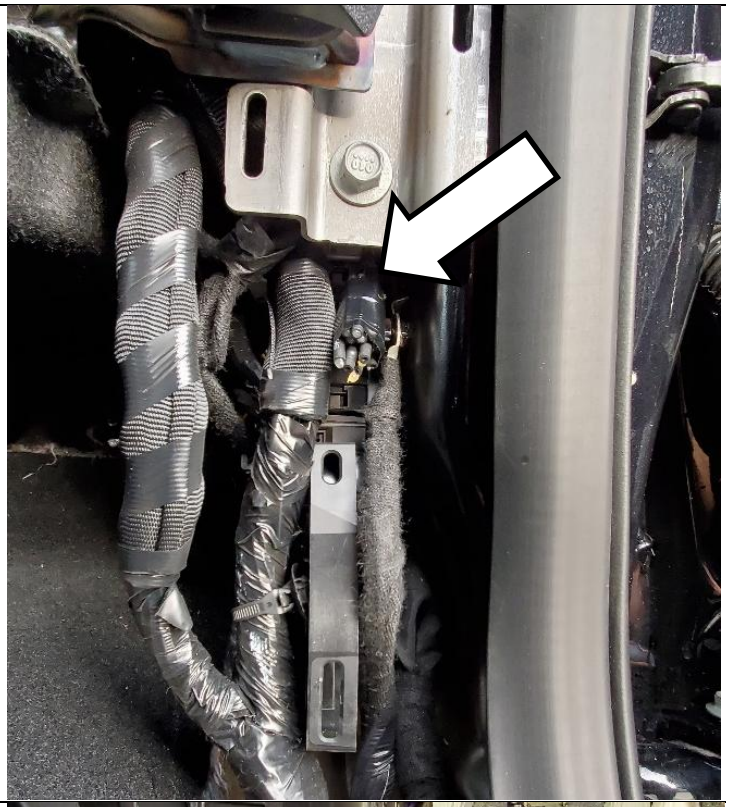
Loosen the front portion of the door sill trim plate by pulling it up.

Remove the passenger side kick panel.



On some 2023+ trucks, the up-fitter pigtail is accessible after removing the kick panel. The pigtail can be identified by the bundle of wire terminals taped together and connected to a grey connector.

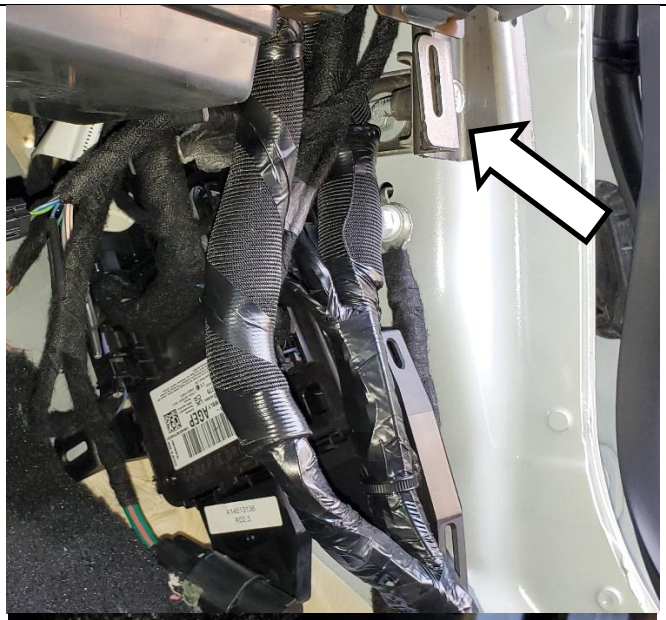
If accessible, unplug the pigtail connector, plug in the BD wire harness, and continue with the control module installation.



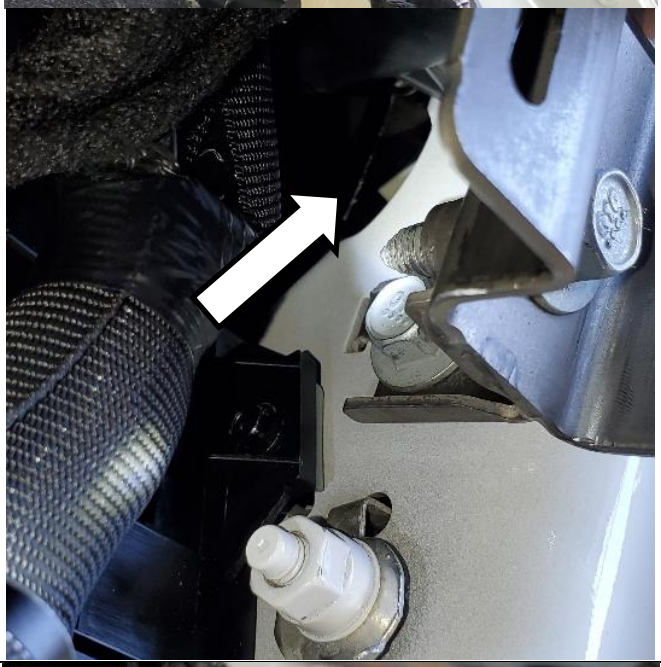
If the pigtail cannot be found at this point, continue by removing the under-dash panel.

Disconnect the electrical connector for the light and set the panel aside.

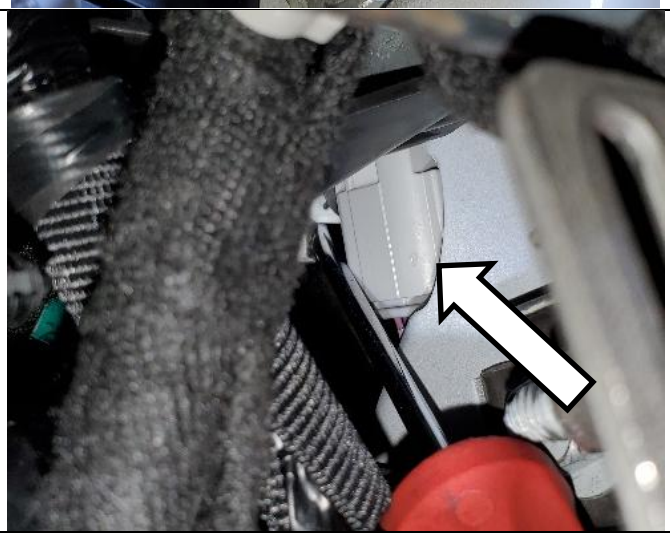
The pigtail location has been found to vary from truck to truck. Shown here is the most hidden and inaccessible spot. The metal bracket that held the plastic panels can be used as a reference point.



In this case, the connector is in a cutout in the truck frame that can be found by looking up, past the wiring harnesses and fuse box. A grey connector should be found in the hole beside the metal bracket.

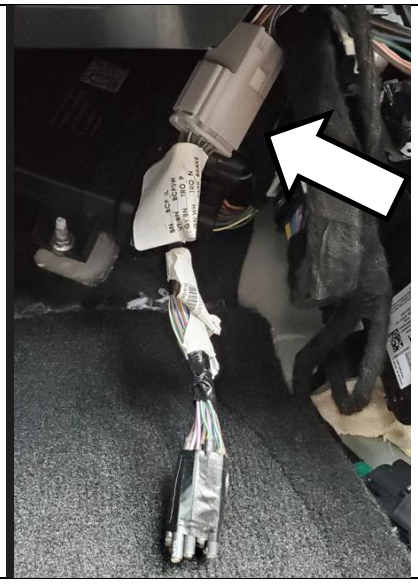


To extract the pigtail out of the hole, use a long screwdriver to push the grey connector up until the end of the pigtail is visible and can be pulled out.



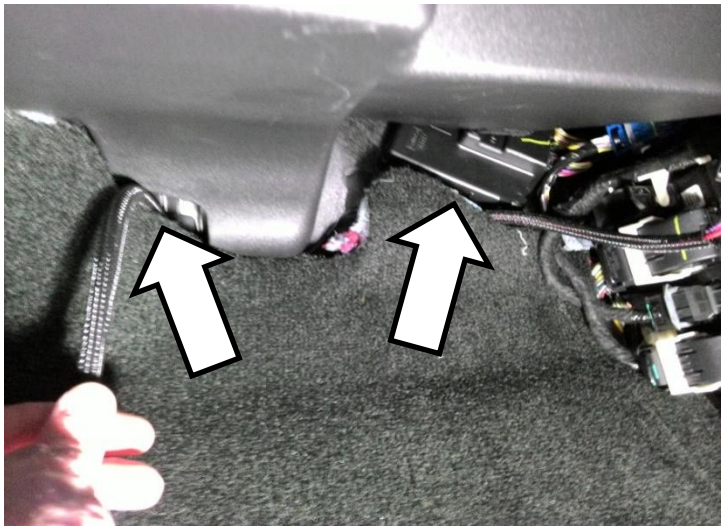
Pull the pigtail free so that the grey connector is visible and can be disconnected. The connector may be clipped in and may require a firm pull to pull down.

This pigtail will not be used, so it may be left in the glove box or tucked back in the fuse box area. Plug in the 2023+ BD High Idle wiring harness to this connector.



Control Module Installation

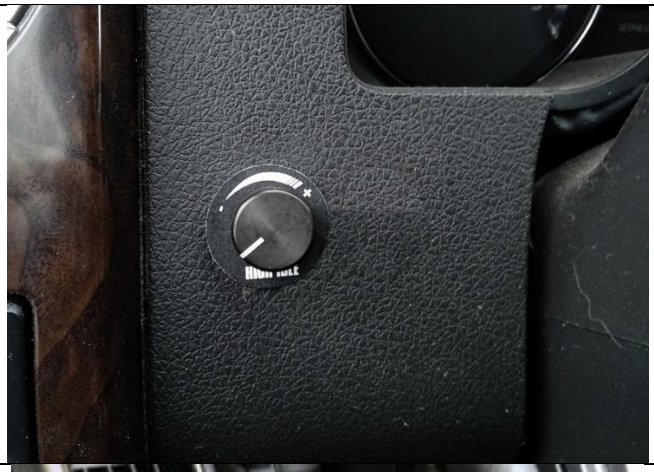
Tuck the wire from the BD High Idle kit behind the carpet/under the dash towards the driver side of the cab. You can remove the lower center console trim to make this easier. Wire may be secured with supplied zip ties.



Remove the aluminum knob by loosening the 1/16” Allen set screw. Remove the nut and washer to install the switch.

Installation with bracket.
Use the supplied self-tapping screws to secure the bracket to the bottom of the dashboard.
Install the switch through the bracket. Apply the decal and reinstall the nut, washer and knob. Attach to the harness.

Installation without bracket. Drill a 9/32” hole in the dash to mount the switch. Beside the first hole, drill a 1/8” hole for the locator tab. Use the switch as a guide for location. Apply the switch decal to the dash and insert the switch through the dashboard. Install retainer nut. Install the knob on the switch using a 1/16” Allen key. Plug the harness into the back of the switch.



If mounting in the knee bolster, be aware of the reinforcement plate behind the bolster, which will limit the available spaces to mount the switch.

Operation

With the engine running, parking brake applied and transmission in park, turn the control knob clockwise until a click is heard. The high idle control is now turned on and the desired engine RPM can be selected by rotating the knob. The adjustment range is 900-3000 RPM (or 800-2400RPM for gasoline engines).

If the transmission is shifted out of park, the brake is pressed, the parking brake released, the throttle pressed, or road speed is detected, the high idle will be disabled for safety. Turn the high idle off and back on to restart it.

NOTE: The high idle feature will be disabled until the engine oil and transmission fluid are at least 20°F (-6°C) for diesel models or 40°F (4°C). This protects the engine against damage from over-revving with cold engine oil. Most emission monitors will also be disabled when in high idle mode. See the disablers section on the next page.

NOTE: On newer trucks, the brake light may come on when the RPM is above 1000RPM. This is a safety feature built-in by Ford and cannot be bypassed.

Disablers for the High Idle

Vehicle Conditions to Enable SEIC	Vehicle Conditions that Disable SEIC
Parking brake applied	Parking brake disengaged
Foot off the service brake	Depressing the service brake
Vehicle in PARK	Vehicle taken out of PARK
Foot off the accelerator pedal	Accelerator pedal depressed
Vehicle speed is 0mph	Vehicle speed is not 0mph
Engine at a stable base idle speed	Transmission oil temp exceeds 240°F
Transmission oil temp above 20°F	Engine coolant temp exceeds 234°F
Engine coolant temp above 20°F (diesel)	Engine coolant temperature limit
Engine coolant temp above 40°F (gas)	Catalyst temperature limit

Troubleshooting and Diagnosis

1. In case the high idle mode is not operating as expected, use the disabler condition charts for the corresponding engine as shown above to ensure the conditions of operation are met. Ensure that the vehicle is stationary with a steady idle before engaging the high idle controller.

2. If following the disabler condition chart does not reveal any issues, then verify that the connector and wires are securely fitted.

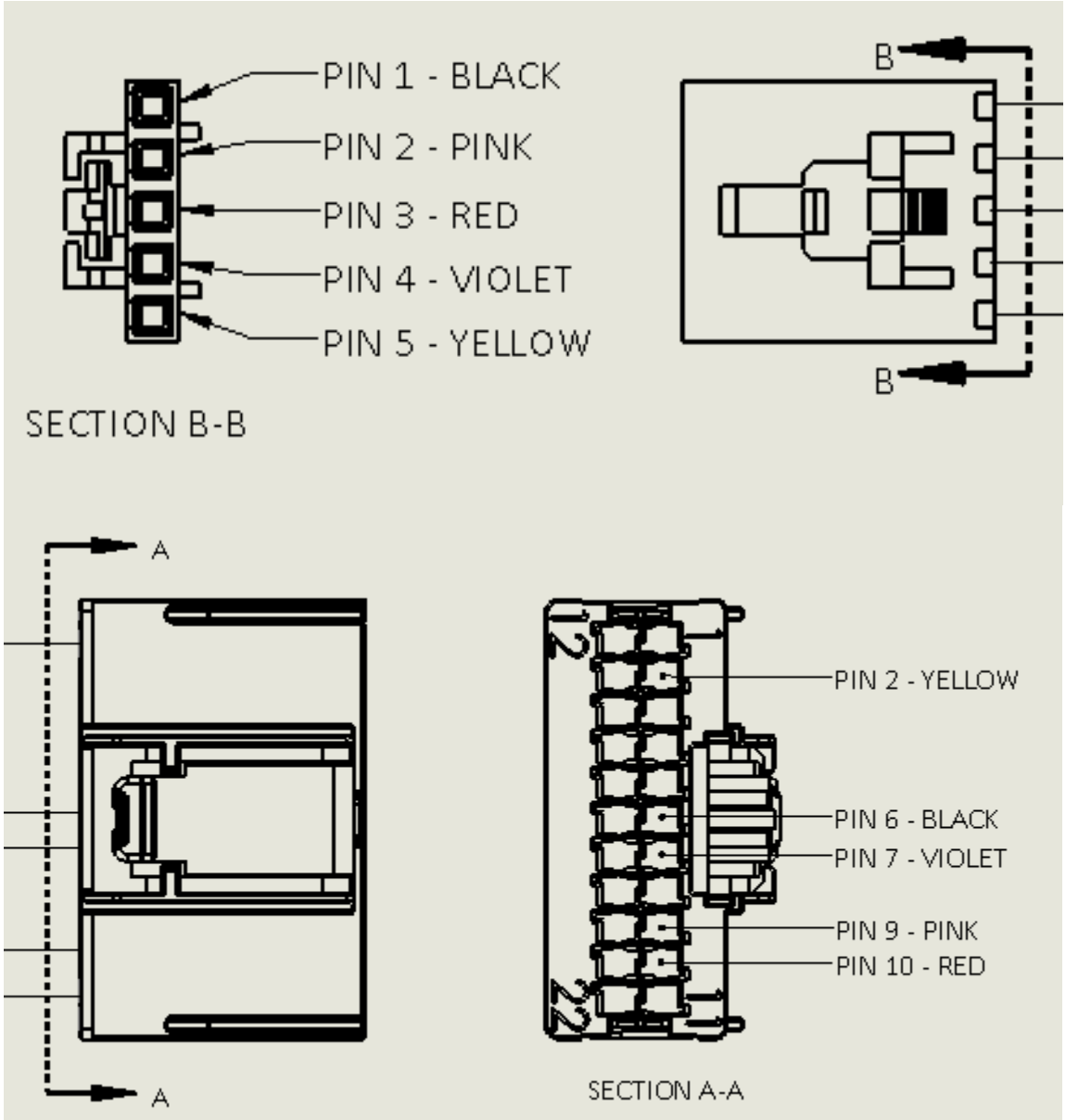
3. In cases where the vehicle is tuned, please ensure that your throttle valve is still connected to its original harness to ensure high idle kit functionality.

4. If the conditions for normal operation are met and the wiring is correctly done, then follow up by checking the switch. The switch must receive 12V from the yellow wire connected to the module and return 12V on the violet wire to the vehicle. To confirm this, use a multimeter to measure the voltage between the violet wire and the black wire. In case the voltage on the violet wire is not 12V, then check that the yellow wire is supplying 12V to the switch by measuring the voltage between the yellow and black wires.

5. If the switch is functioning as expected, then measure the voltage on the RPM control wire. Connect a multimeter between the pink wire and black wire and ensure that turning the knob changes the voltage reading between 0 and 5V. If there is no voltage on the pink wire, then check the red reference wire. Measure the voltage between the red and black wires to ensure it is 5V.

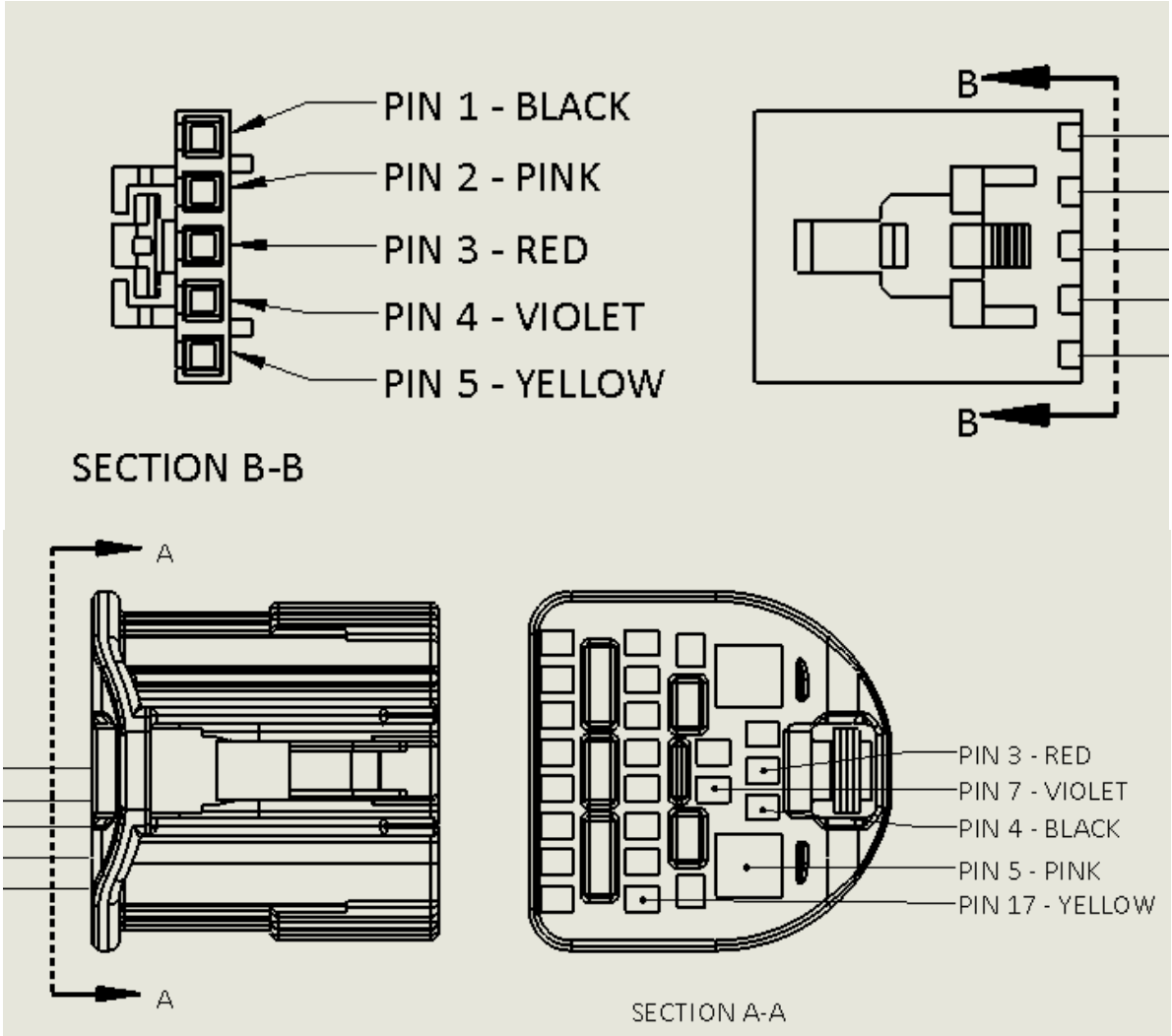
6. If the steps above do not reveal any apparent issues, then contact BD technical support for further assistance.

BD Harness 1306618 Pinout



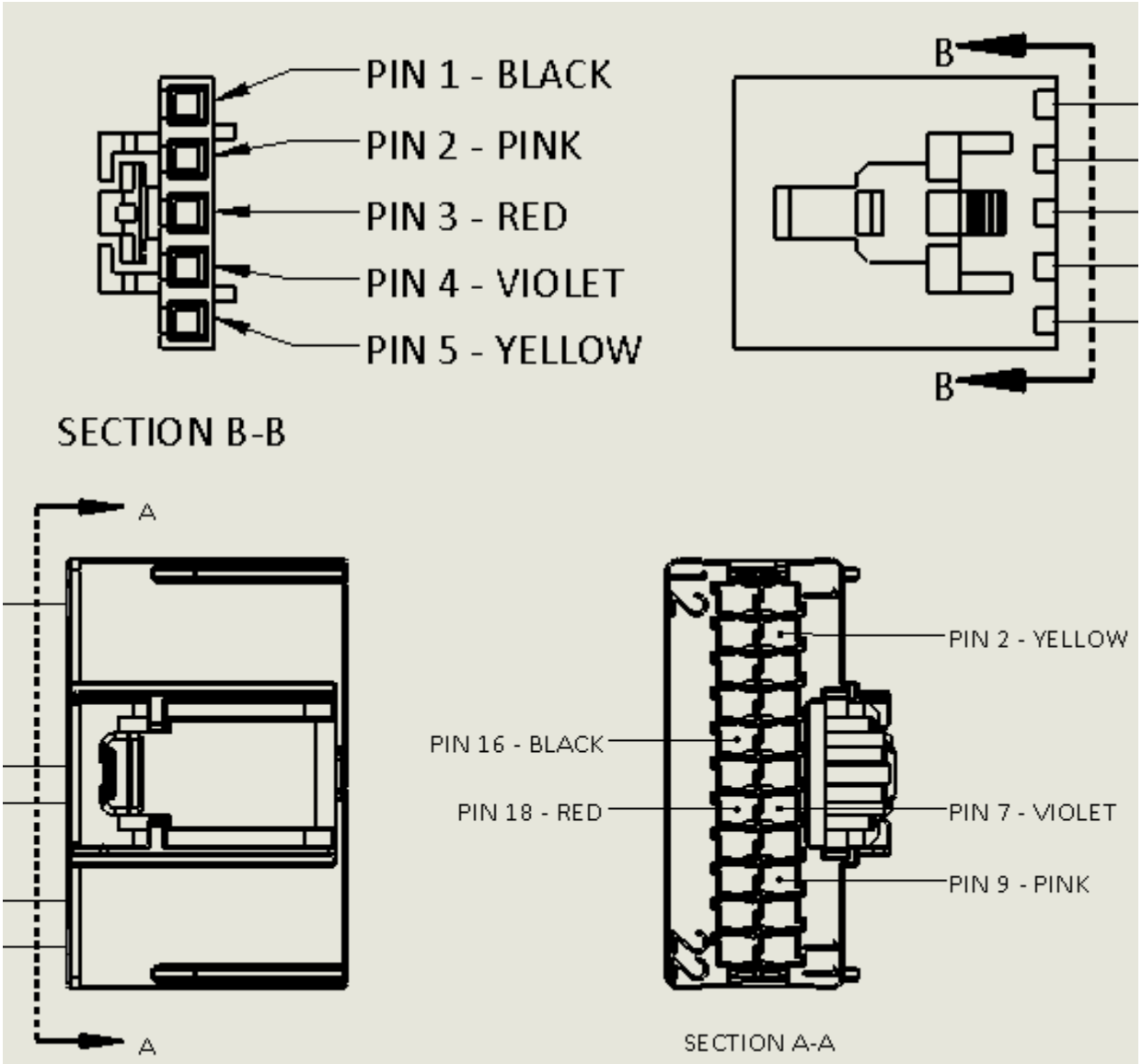
PIN 1 (BLACK) – RTN (0V)
PIN 2 (PINK) – RPM (0.2-4.7V)
PIN 3 (RED) – REF (5V)
PIN 4 (VIOLET) – SEIC (12V PCM Signal Return)
PIN 5 (YELLOW) – IGN (12V Key On)

BD Harness 1306619 Pinout



PIN 1 (BLACK) – RTN (0V)
PIN 2 (PINK) – RPM (0.2-4.7V)
PIN 3 (RED) – REF (5V)
PIN 4 (VIOLET) – SEIC (12V PCM Signal Return)
PIN 5 (YELLOW) – IGN (12V Key On)

BD Harness 1306620 Pinout



PIN 1 (BLACK) – RTN (0V)
PIN 2 (PINK) – RPM (0.2-4.7V)
PIN 3 (RED) – REF (5V)
PIN 4 (VIOLET) – SEIC (12V PCM Signal Return)
PIN 5 (YELLOW) – IGN (12V Key On)