E-BOM751-A (Blackout Module)

2018-2024 RAM 1500 Classic
2018-2024 RAM 2500-5500

Introduction

The E-BOM751-A module is used for Police RAM Trucks and has the ability to eliminate all exterior lighting to aid in covert operations. When activated, it will eliminate the parking lamps, reverse lights, and the Service Brake lights. Maximum speed can be set between 5-20 mph to automatically return brake lights for safety purposes.

Installation Instructions

Disconnect vehicle battery before proceeding with the installation.

CAUTION

All electronic products are susceptible to damage from Electrostatic Discharge or ESD. Ground yourself before handling or working with the module and harnessing by first touching chassis ground, such as the barrel of the cigarette lighter.

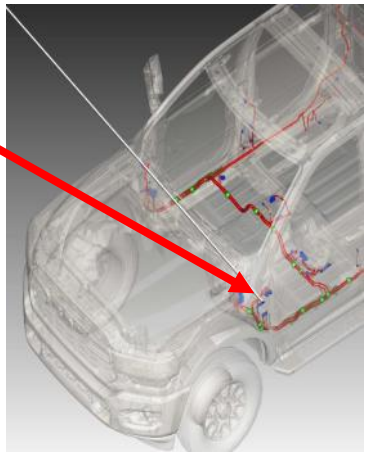
It is the installer's responsibility to route and secure all wiring harnesses where they cannot be damaged by sharp objects, mechanical moving parts and high heat sources. Failure to do so could result in damage to the system or vehicle and create possible safety concerns for the operator and passengers.

It is important to avoid placing the module where it could encounter strong magnetic fields from high current cabling connected to motors, solenoids, etc. Also avoid radio frequency energy from antenna's or inverters next to the module. Finally, avoid high voltage spikes in vehicle wiring by always using diode clamped relays when installing upfitter circuits.

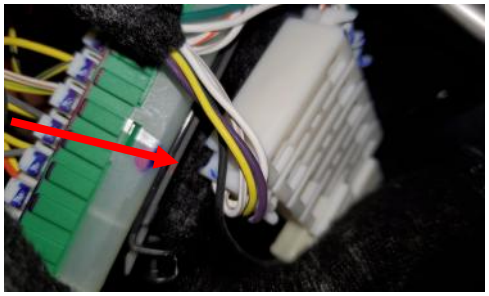
Data Link Harness - 840-00026

1. Locate the vehicle's OBDII Data Link Connector. It is a White 16-pin connector around the area above the drivers left foot.
2. Use a flat screwdriver to remove the OEM OBDII connector. There are tabs on the sides of the connector that allow it to snap into place. Press the tabs and push the connector up and out of its bracket. The E-BOM751-BC kit includes a Data Link harness (see picture). Plug the red connector from the E-BOM751-BC Data Link Harness into the vehicle's OBDII connector. Ensure the connection is fully seated and secured with the supplied wire tie.
3. Mount the White pass through connector from the E-BOM751-BC Data Link Harness in the former location of the vehicle's OBDII connector.
4. Secure the E-BOM751-BC Data Link Harness so that it does not hang below the lower dash panel.
5. Plug the free end of the Data Link Harness into the extended harness which then plugs into the mating 6-pin connector on the E-BOM751-BC module.

6. Locate the STAR connector bank in the location shown (next to the Park Brake). The vehicle might have 2 Green banks of connectors, or 1 Green and 1 White bank.



7. Plug the 2-pin connector with the **Yellow and Brown** wires into one of the unused ports on the bank with mostly Yellow wires.
8. Plug the 2-pin connector with the **Green and Blue** wires into one of the unused ports on the bank with mostly White wires. Which connector on the harness to use depends on which style of connector bank is on the vehicle.



Momentary Push Button (S-H84FX)

The Pink/Black wire (Pin 8 of the 8-pin connector on S-H43EX) is used to enable Blackout Mode. The input requires a momentary push button (included on S-H84FX) connected to Ground.

1. Drill a 16mm (0.630") hole in the desired mounting location.
2. Route the harness through the hole to mount the switch in the hole:

   A. Remove lock nut from switch

   B. Do not dis-assemble the switch to install

   C. Pull the harness through the hole
3. Slide the lock nut onto the harness and snug it down onto the back of the switch.
4. Connect the bullet connector to the mating bullet connector on the S-H43EX harness. Connect the other wire to Ground

BOM Module

Locate the module in an area away from any external heat sources (engine heat, heater ducts, etc.). Do not mount the module until all post installation testing is complete and wire harnesses are routed and secure.

Blackout Input

- The Green/White wire (Pin 5 of the 12 pin connector) is the input used to enable Blackout Mode. The input requires a momentary push button (included on S-H84FX) connected to Ground.

- The PINK/BLACK wire (Pin 1 of the 4 pin connector) is the input used to enable Blackout Mode. The input requires a momentary push button (included on S-H84FX) connected to +12V.
- Only use one of the inputs to enable blackout mode.

Blackout Status Output

- The Yellow wire (Pin 8 of the 12 pin connector) will be +12 volts when Blackout mode is active. Connect to an LED (not included).

12-pin connector pin out definition

- Pin #1 - N/C
- Pin #2 - N/C
- Pin #3 - N/C
- Pin #4 - N/C
- Pin #5 - GREEN/WHITE - Black Out Input (Ground)
  Pin #6 - N/C
- Pin #7 - N/C
- Pin #8 - YELLOW - Black Out LED Output (12V)
- Pin #9 - N/C
- Pin #10 - N/C
- Pin #11 - N/C
- Pin #12 - N/C

4-pin connector pin out definition

- Pin #1 - PINK/BLACK– Blackout Input (+12V)
- Pin #2 - N/C
- Pin #3 - N/C
- Pin #4 - N/C

Blackout Mode

Introduction

- The Blackout module has the ability to eliminate all exterior lighting to aid in covert operations. This includes parking lamps, reverse lights, and Service Brake lights. Its intended use is for Police RAM Trucks. A maximum speed can be set to automatically return brake lights for safety purposes.

Blackout Input

- The Green/White wire (Pin 5 of the 12 pin connector is the input used to enable Blackout Mode. The input requires a momentary push button (included) connected to Ground.

Blackout Status Output

- The Yellow wire (Pin 8 of the 12 pin connector on S-H43EX) will be +12 volts when Blackout mode is active. Connect to an LED.

Blackout Mode Operating Instructions:

To enter Blackout Mode. ALL preconditions must be met.

- Cluster Brightness can be turned Off. (Optional described in page 5)
- Speed must be below configured maximum speed. (5-20)
- Momentarily apply ground to Pink/Black wire to enter Blackout Mode. (press momentary button)

Blackout Status Output will be +12 volts when Blackout Mode is active.

To exit Blackout Mode any condition may be applied:

- Vehicle is moving above maximum speed.
- Momentarily apply ground to Pink/Black wire to exit Blackout Mode. (press momentary button)

How to turn OFF Cluster Backlighting

*Set switch to Parking or Low Beams.

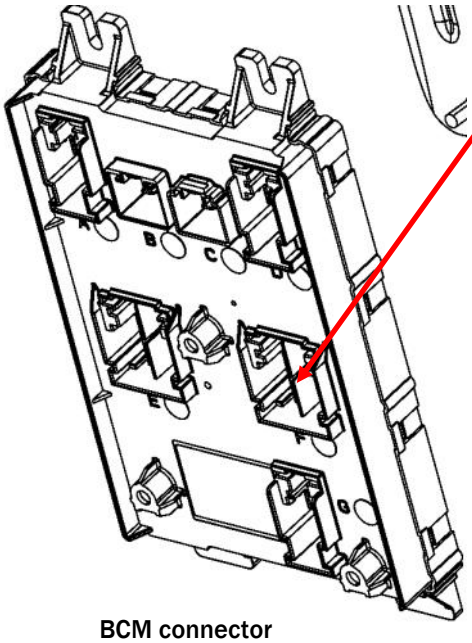
Rotate the dimmer control to the extreme bottom position.

Rear Hitch Light (If Equipped)

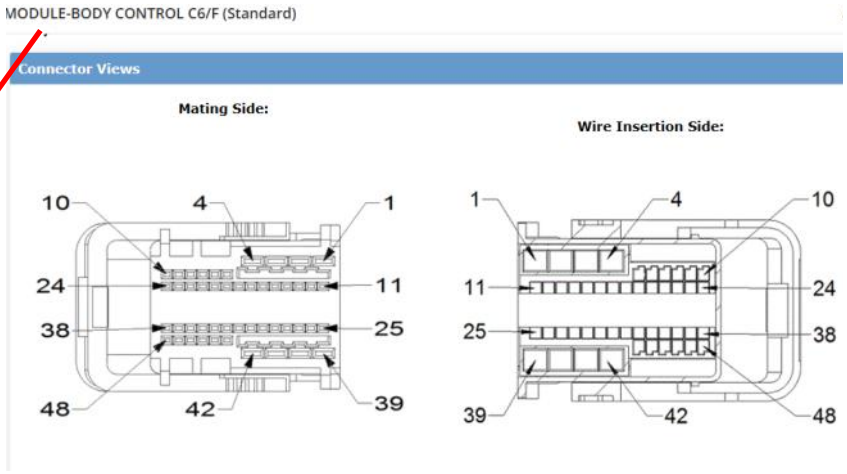
Skip this step if not equipped.

The rear hitch light circuit is located on the Driver side compartment. Locate the BCM connector **C6/F** plugged into the BCM and disconnect it. This part of the installation will a relay.

1. Locate Pin #37 White/Gray wire of connector **C6/F**
2. Verify with DVM there is 12 volts when reverse lights are on and 0V when reverse lights are off.
3. Cut the White/Gray wire about 3 inches from the connector .
4. Attach the Connector side of the White/Gray wire to pin 30 of relay 1.
5. Attach the harness side of the White/Gray wire to pin 87A of relay 1.
6. Locate the yellow wire, pin 8 (12 pin connector) on the BOM module and attach to pin 86 of relay 1.
7. Attach a ground to pin 85 of relay 1.
8. Securely mount relay 1.

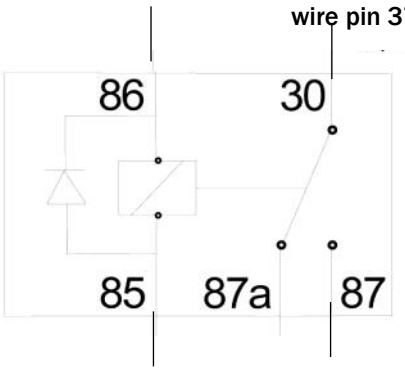


BCM connector



Yellow wire from 12w connector

Connector side of White/Gray wire pin 37



Ground

Harness side of White/ Gray wire pin 37

Post Installation / Check List

The following checks must be made after installation of the system, to ensure correct and safe operation of the lift. If any of the checks do not pass, do not deliver the vehicle. Recheck all connections per the installation instructions.

1. Turn ignition key On (to “Run”).
2. Apply the Parking Brake
3. Ground Blackout mode input (Green/White).
4. Verify blackout output (Yellow) is +12 Volts
5. Verify All exterior lights are disabled.
6. Hold Service Brake and verify the Brake lights are disabled.
7. Place transmission in Reverse and verify lights are disabled
8. Apply Blackout mode input to exit Blackout mode (Green/White).
9. Verify all lights are functioning properly.

DO NOT PUT VEHICLE IN SERVICE IF IT DOES NOT PASS ALL OF THE ABOVE TESTS
Contact InterMotive at 530-823-1048 for technical assistance

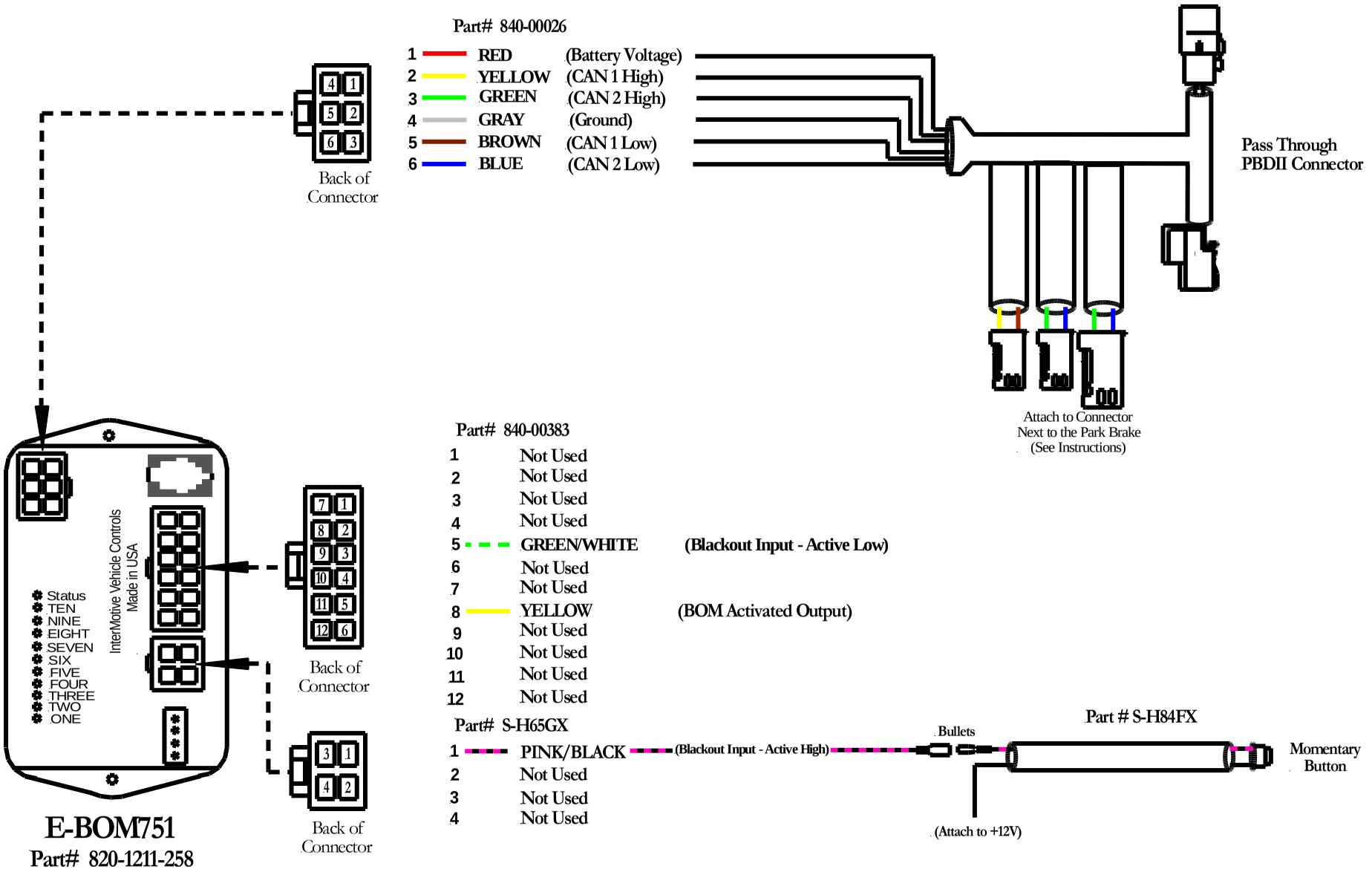
Blackout Mode Diagnostics

Diagnostic Mode is entered by pressing the Test button on the module. The module provides diagnostic LEDs which illuminate according to the following table. To exit this mode, cycle the key. **For diagnostics for the Blackout Mode portion of the BOM module, momentarily press the Test button. The Status LED will Flash 3 times repeatedly.**

LED #	Diagnostic Mode LED Descriptions
1	Blackout Mode Active
2	VSS less than 15mph
3	Low Beams Off
4	High Beams Off
5	Park Lamps Off
6	DRL Off
7	Cluster Off
8	Blackout Input Status
9	Speed Inhibit Enabled

Press Test button to enter Diag. Mode

U.S. Patent #9,469,261



Submit product registration at www.intermotive.net

If the BOM fails any step in the System Operation Test, review the installation instructions and check all connections.
If necessary, call InterMotive Technical Support at (530) 823-1048

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