

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

## System or Parts affected

### Underhood70 V900118

- Throttle Control P/N# 3560229

### Underhood70 V900119

- Throttle Control P/N# 3560230

## Overview

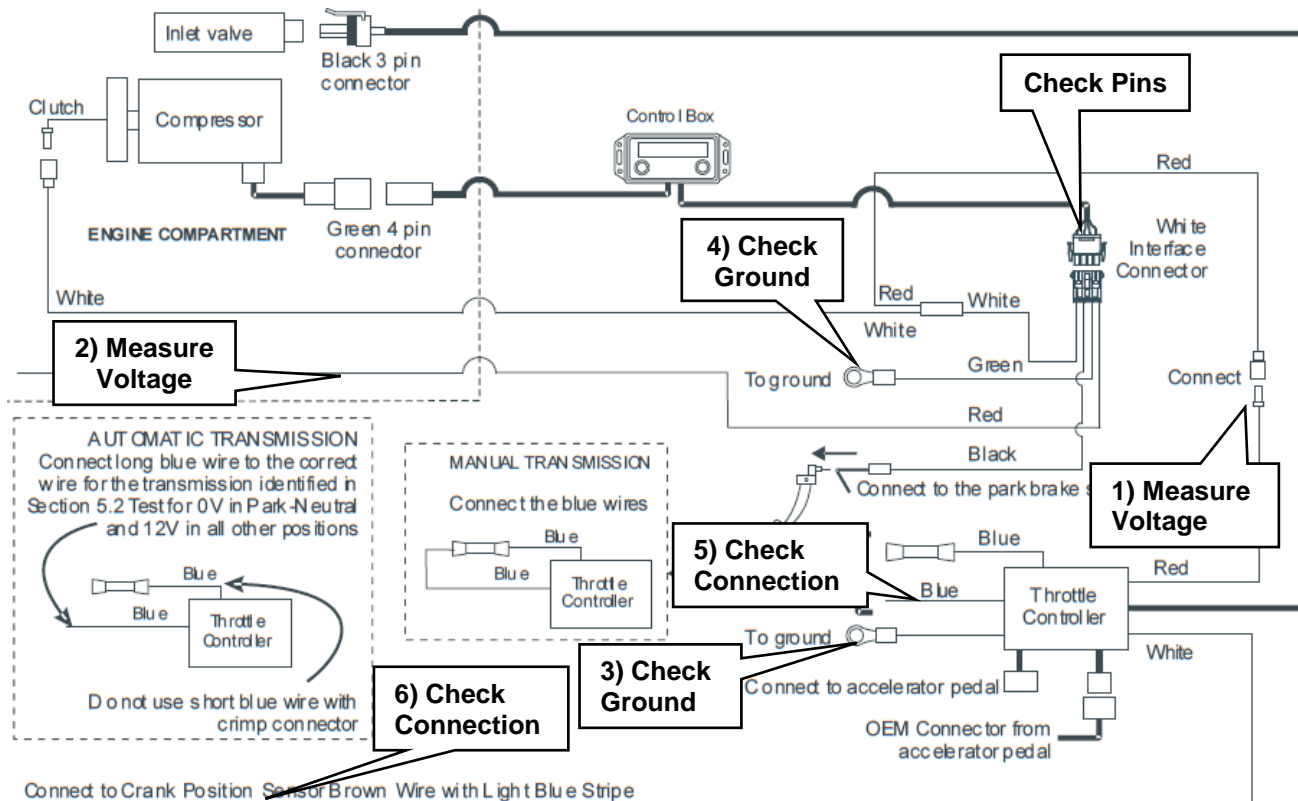


Figure 1

## Isolate Issues:

- 1) With the engine off, key in the run position and park brake applied, measure the voltage to the RED throttle control +12V wire (Should be +12V DC). This will be powered when compressor is turned on.
- 2) With the engine off, key in the run position and park brake applied, measure voltage on the RED wire running to the WHITE interface connector (Should be +12V DC). This will be powered when key switch is on.
- 3) Measure the resistance of the GREEN ground connection from the throttle controller to the vehicle battery's negative terminal. This reading should be less than 1 ohm.
- 4) Measure resistance between WHITE interface connector ground terminal and battery negative terminal. This reading should be less than 1 ohm.
- 5) Check the BLUE wire from the throttle controller, ensure it is a good soldered connection to the Transmission wire identified in Section 5.2 of the install manual.
- 6) Check the WHITE wire from the throttle controller to the "clean tach out" brown wire with the light blue stripe at the ECM. Ensure this is a good soldered connection.

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

## Additional Throttle Control Connections

**i** The information below is from section 8.2 of the installation manual. Refer to this information for additional connections if the above steps do not resolve the issue.

### Automatic Transmission

- ☐ Locate the two electrical connectors on the engine control module. The forward connector is Tan and the rear is Grey. (Figure 2)

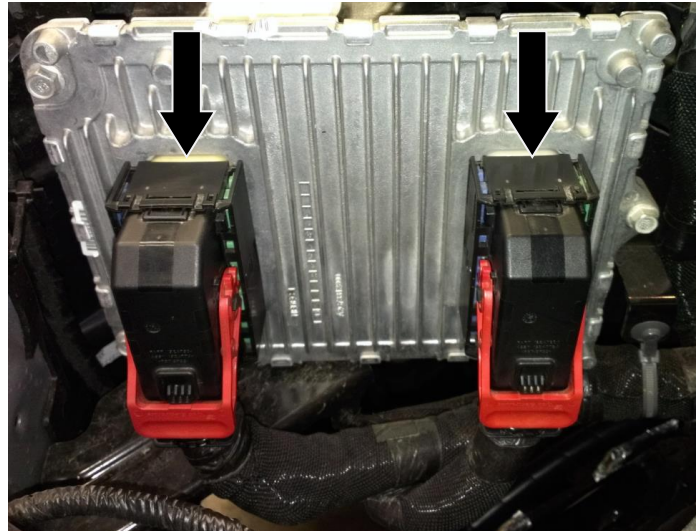


Figure 2

- ☐ Push in the plastic tab on the top of the electrical connector to remove the back of the **forward TAN** electrical connector. (Figure 3)

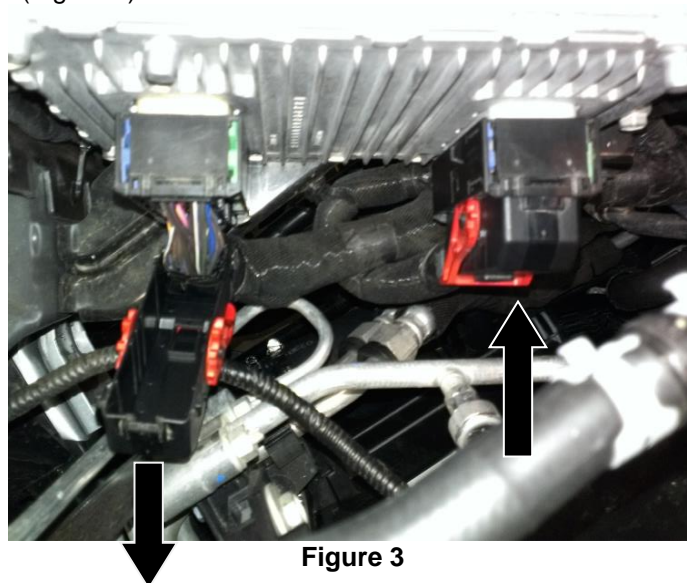


Figure 3

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Pull the electrical connector out of the ECM. (Figure 4)



Figure 4

- ☐ Cut the OEM strap off of the bottom of the connector. (Figure 5)



Figure 5

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Keep the OEM connector but discard of the strap. (Figure 6)



Figure 6

- ☐ Remove the electrical tape from the wiring harness and gently pull back the insulation to expose the wiring bundle. (Figure 7)



Figure 7

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018



## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ The top right of the electrical connector should be marked 96, count 10 to the left to locate pin 86. This should have a brown wire with a light blue stripe. To verify you have the correct wire you can plug the connector back into the ECM and back probe this wire. It should have approximately 4.7VDC and 1000Hz = 1000 RPM with the engine running. (Figure 8)



Figure 8

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Cut and strip the brown wire with the light blue stripe. (Figure 9)

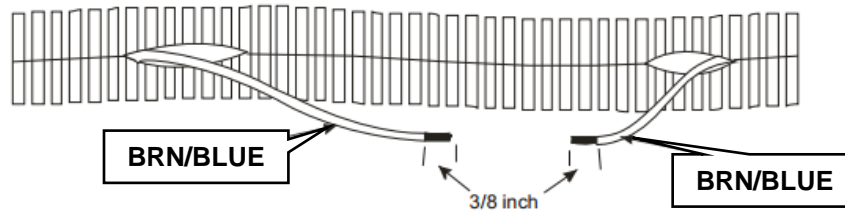


Figure 9

- ☐ Slip on the heat shrink tube. (Figure 10)

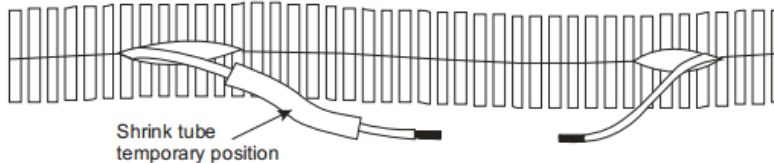


Figure 10

- ☐ Strip 1" of insulation from the end of the white throttle control wire and twist onto both stripped free ends of the brown wire with the light blue stripe. (Figure 11)

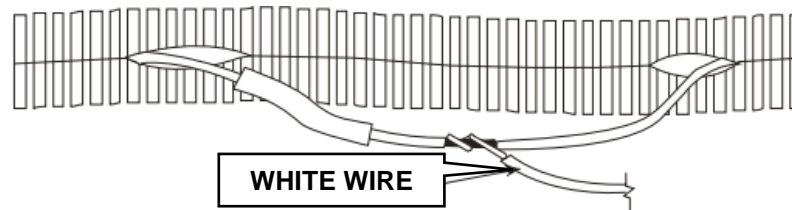


Figure 11

- ☐ Solder using 60/40 rosin core solder supplied. Apply heat to the bottom of the wire and put the solder on the top of the wire. Use the heat from the soldering iron to pull the solder through the twisted bundle. (Figure 12)

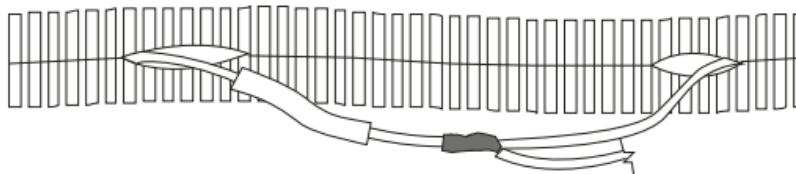


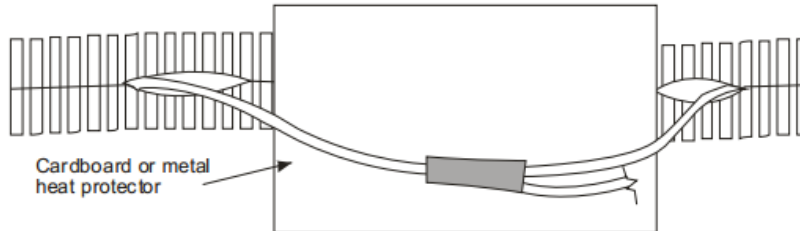
Figure 12

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

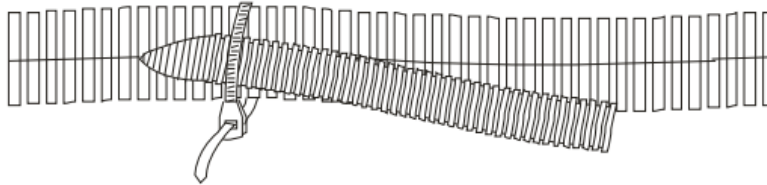
2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Slide the heat shrink over the soldered joint and shrink with a heat gun. Do not overheat and be sure to protect the other nearby wire bundles with cardboard or sheet metal. (Figure 13)



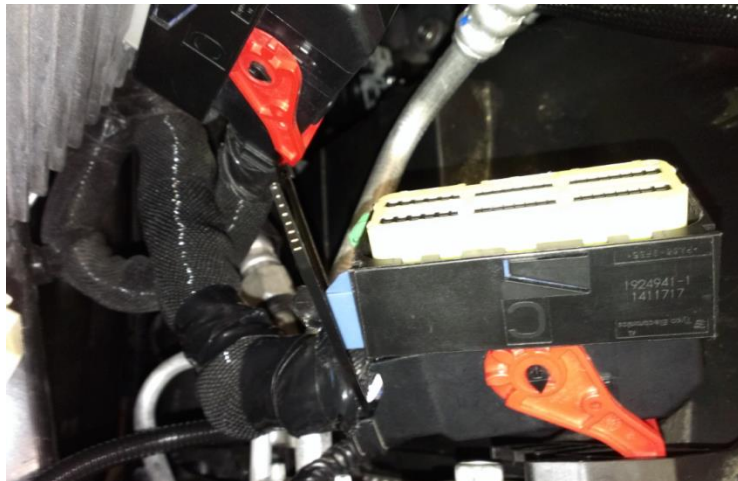
**Figure 13**

Put the wires back into the OEM loom and wrap with electrical tape. Use 1/4" wire loom to cover the white throttle control wire. (Figure 14)



**Figure 14**

- ☐ Install a new tie strap into the back of the OEM electrical connector and wrap around the wire bundle. (Figure 15)



**Figure 15**

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Install the back of the OEM connector onto the electrical connector and plug it back into the Engine Control Module. (Figure 16)



Figure 16

- ☐ Remove the right Grey electrical connector from the Engine Control Module, remove the back connector cover. (Figure 17)



Figure 17

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018



## Subject

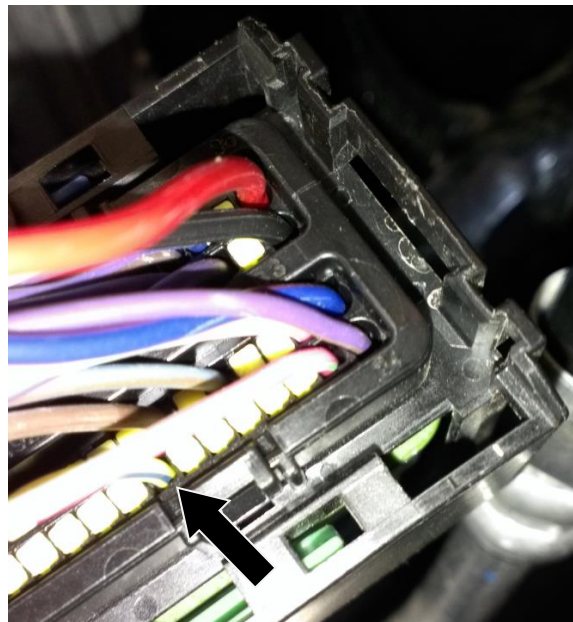
2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Cut the OEM strap off of the bottom of the connector. (Figure 18)



**Figure 18**

- ☐ The bottom right of the electrical connector should be marked 24, count 7 to the left to locate pin 17. This should have a yellow wire with a blue stripe. This wire should show 0 Volts in Park or Neutral and approximately 12 V in all other gear selections when tested with a multi-meter. (Figure 19)



**Figure 19**

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Cut and strip the yellow wire with a blue stripe. (Figure 20)

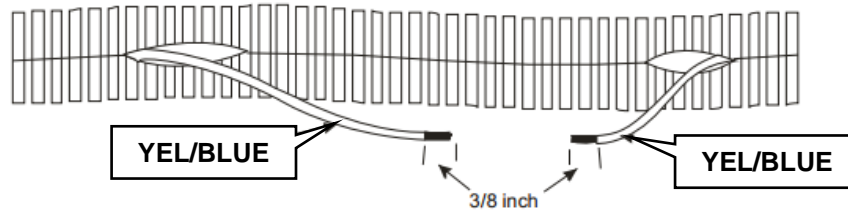


Figure 20

- ☐ Slip on the heat shrink tube. (Figure 21)

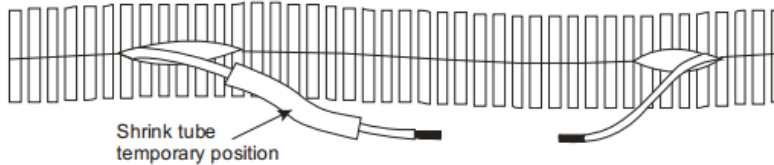


Figure 21

- ☐ Strip 1" of insulation from the end of the blue throttle control wire and twist onto both stripped free ends of the yellow wire with the blue stripe. (Figure 22)

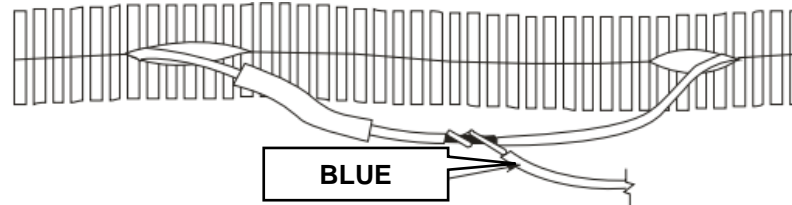


Figure 22

- ☐ Solder using 60/40 rosin core solder supplied. Apply heat to the bottom of the wire and put the solder on the top of the wire. Use the heat from the soldering iron to pull the solder through the twisted bundle. (Figure 23)

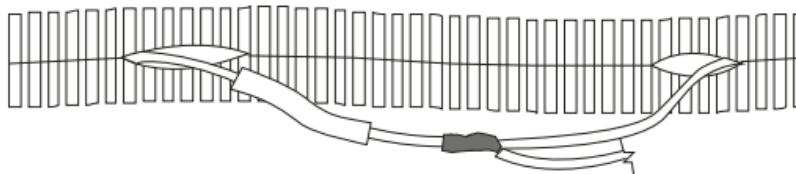


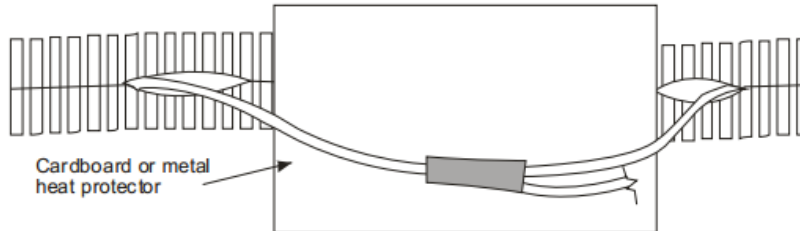
Figure 23

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018

## Subject

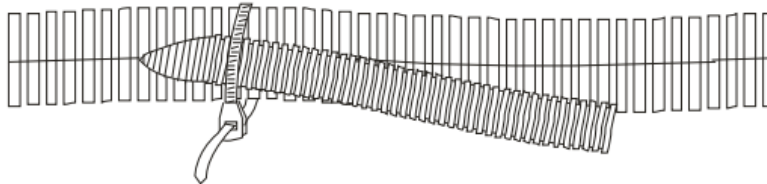
2014 - 2018 RAM 6.4L / 5.7L Hemi Throttle Control Diagnostics

- ☐ Slide the heat shrink over the soldered joint and shrink with a heat gun. Do not overheat and be sure to protect the other nearby wire bundles with cardboard or sheet metal. (Figure 24)



**Figure 24**

- ☐ Put the wires back into the OEM loom and wrap with electrical tape. Use ¼" wire loom to cover the white throttle control wire. (Figure 25)



**Figure 25**

- ☐ Install a new tie strap into the back of the OEM electrical connector and wrap around the wire bundle
- ☐ Install the back of the OEM connector onto the electrical connector and plug it back into the Engine Control Module. (Figure 26)



**Figure 26**

## Manual Transmission

- ☐ Cut the long blue wire to about 6 inches, strip the end and connect it to the short blue wire with the crimp connector.

Document	Version	Department	Revision Details	Revised by	Tech	Engineering	Implemented
EXT-VRTC-004	B	Tech	Title Change (M/Y)	BDJ	N/A	N/A	18 Jun 2018