with Installation Instructions

Owner's Manual

Banks Derringer® Tuner

2017 GM 6.6L L5P Duramax

THIS MANUAL IS FOR USE WITH SYSTEM 66582, 66592, 66592-DL

Gale Banks Engineering
546 Duggan Avenue • Azusa, CA 91702
(626) 969-9600 • Fax (626) 334-1743

Product Information & Sales: (888) 635-4565
Customer Support: (888) 839-5600
Installation Support: (888) 839-2700

bankspower.com

4/4/2018 **PN 97661** v.1

General Installation Practices

Dear Customer,

If you have any questions concerning the installation of your Banks Techni-Cooler, please call our Technical Service Hotline at (888) 839-2700 between 7:00 a.m. and 4:00 p.m. (PT). If you have any questions relating to shipping or billing, please contact our Customer Service Department at (888) 839-5600.

Thank you.

1. Before starting work, familiarize yourself with the installation procedure by reading all of the instructions.

2. The exploded views (**Pages 8-10**) provides only general guidance. Refer to each step and section diagram in this manual for proper instruction.

3. Throughout this manual, the left side of the vehicle refers to the driver's side, and the right side to the passenger's side.

4. Disconnect the negative (ground) cable from the battery (or batteries, if there are more than one) before beginning work. The OEM battery clamp can be removed using a 10mm socket or wrench.

5. Route and tie wires and hoses a minimum of 6" away from exhaust heat, moving parts and sharp edges. Clearance of 8" or more is recommended where possible.

6. During installation, keep the work area clean. Do not allow anything to be dropped into intake, exhaust, or lubrication system components while performing the installation, as foreign objects will cause immediate engine damage upon start-up.

CAUTION! Do not use floor jacks to support the vehicle while working under it. Do not raise the vehicle onto concrete blocks, masonry or any other item not intended specifically for this use.

7. During installation, keep the work area clean. Do not allow anything to be dropped into intake, exhaust, or lubrication system components while performing the installation, as foreign objects will cause immediate engine damage upon start-up.

Disclaimers

THIS IS A HIGH PERFORMANCE PRODUCT. USE AT YOUR OWN RISK. Do not use this product until you have carefully read the following agreement.

This sets forth the terms and conditions for the use of this product. The installation of this product indicates that the BUYER has read and understands this agreement and accepts its terms and conditions.

Disclaimer of Liability

Gale Banks Engineering Inc. and its distributors, employees, and dealers(hereafter "***SELLER***") shall in no way be responsible for the product's proper use and service. The ***BUYER*** hereby waives all liability claims.

The ***BUYER*** acknowledges that he/she is not relying on the ***SELLER***'s skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extended beyond the description on the face hereof and the ***BUYER*** hereby waives all remedies or liabilities, expressed or implied, arising by law or otherwise, (including without any obligations of the ***SELLER*** with respect to fitness, merchantability, and consequential damages) whether or not occasioned by the ***SELLER***'s negligence. The ***BUYER*** is responsible to fully understand the capability and limitations of his/her vehicle according to manufacturer specifications and agrees to hold the ***SELLER*** harmless from any damage resulting from the failure to adhere to such specifications.

The ***SELLER*** disclaims any warranty and expressly disclaims any liability for personal injury or damages. The ***BUYER*** acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the ***BUYER*** agrees to indemnify the ***SELLER*** and to hold the ***SELLER*** harmless from any claim related to the item of the equipment purchased. Under no circumstances will the ***SELLER*** be liable for any damages or expenses by reason of the use or sale of any such equipment.

The ***BUYER*** is responsible to obey all applicable federal, state, and local laws, statutes, and ordinances when operating his/her vehicle, and the ***BUYER*** agrees to hold ***SELLER*** harmless from any violation thereof.

The ***SELLER*** assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt, contact the manufacturer.

The ***BUYER*** is solely responsible for all warranty issues from the automotive manufacturer.

Limitation of Warranty

Gale Banks Engineering Inc. (hereafter "***SELLER***"), gives Limited Warranty as to description, quality, merchantability, fitness for any particular purpose, productiveness, or any other matter of ***SELLER***'s product sold herewith. The ***SELLER*** shall be in no way responsible for the product's open use and service and the ***BUYER*** hereby waives all rights except those expressly written herein. This Warranty shall not be extended or varied except by written instrument signed by ***SELLER*** and ***BUYER***.

Please see enclosed warranty information card, or go to **www.bankspower.com/warranty** for warranty information regarding

your product. All products that are in question of Warranty must be returned shipping prepaid to the ***SELLER*** and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Gale Banks Engineering Inc.

Under no circumstance shall the ***SELLER*** be liable for any labor charged or travel time incurred in diagnosis for defects,removal, or reinstallation of this product,or any other contingent expense.

Under no circumstances will the ***SELLER*** be liable for any damage or expenses incurred by reason of the use or sale of any such equipment.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT:

The ***BUYER*** may promptly return this product, in a new and unused condition, with a dated proof-of-purchase, to the place-of-purchase within thirty (30) days from date-of-purchase for a full refund, less shipping and/or restocking fee.

The installation of this product indicates that the ***BUYER*** has read and understands this agreement and accepts its terms and conditions.

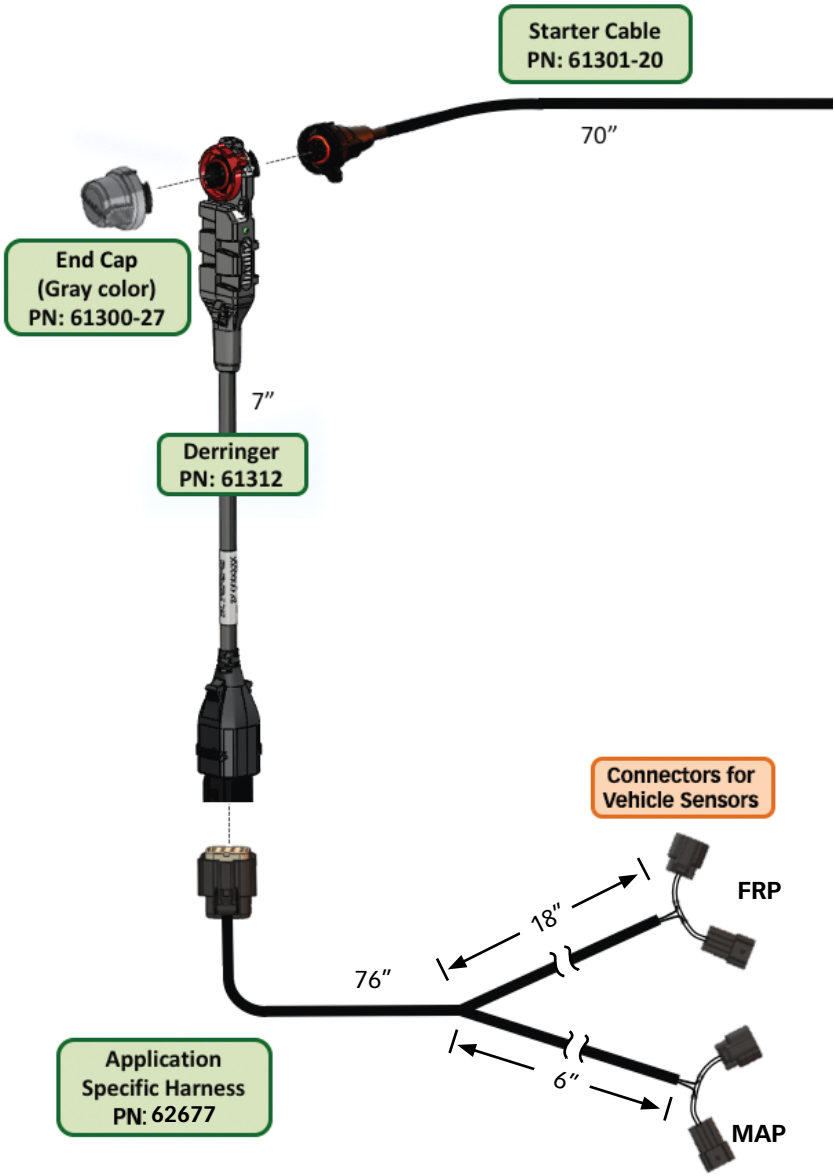
Table of Contents

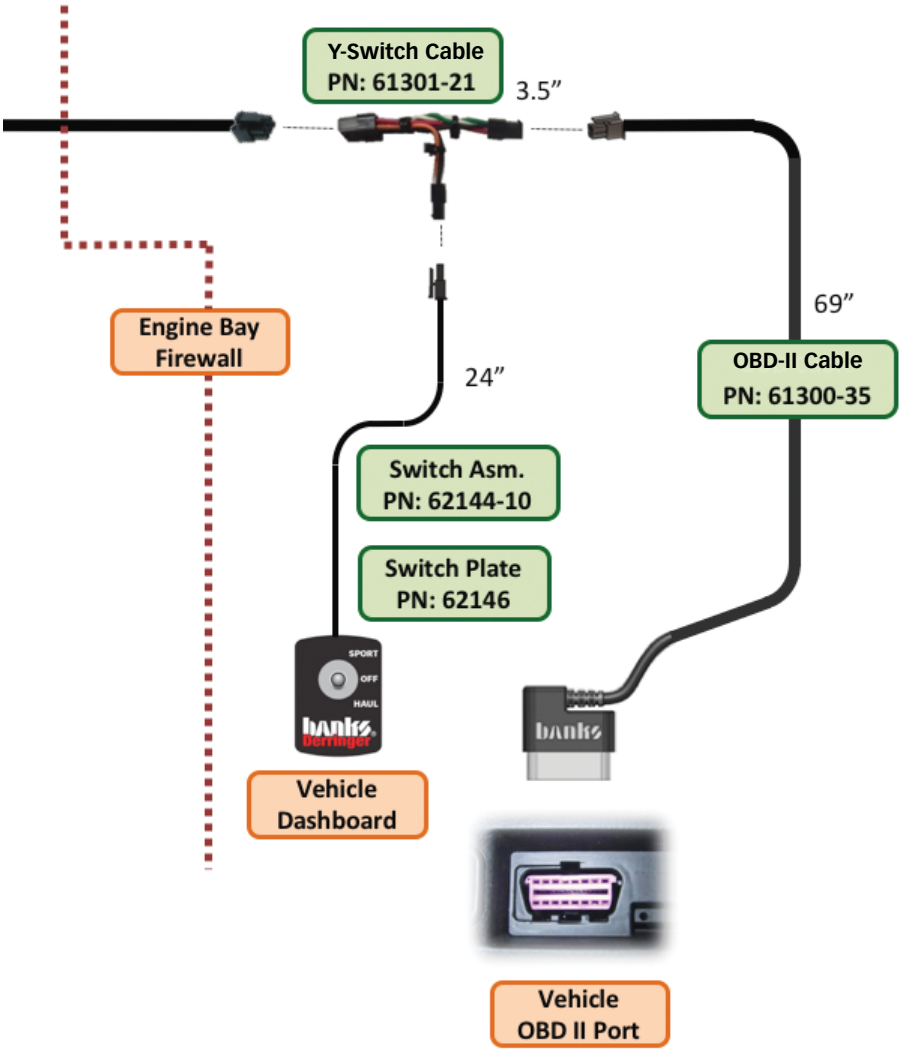
SECTION 1.0

Installation of Wire Harness and Derringer Tuner

Section 1.1 Wiring Diagram

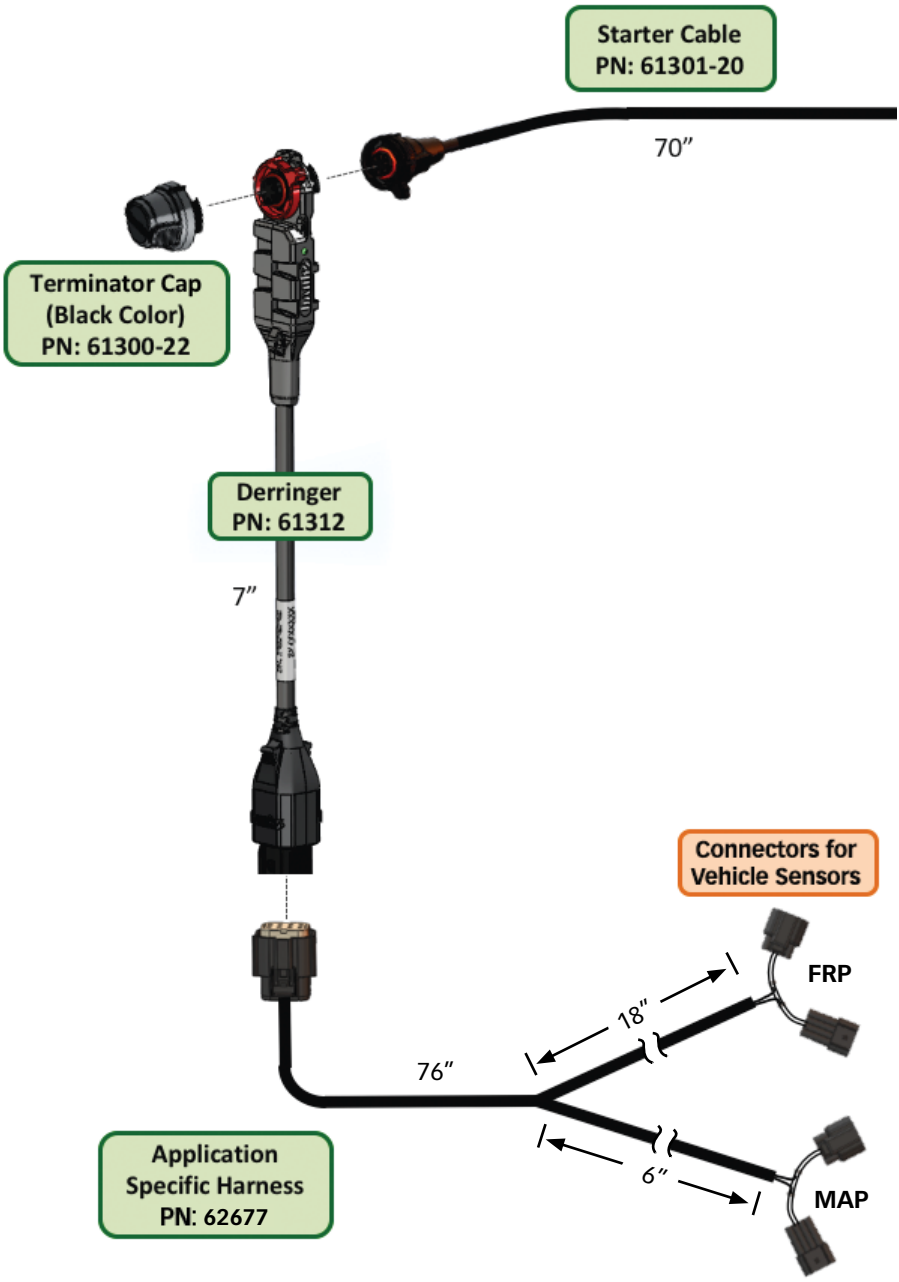
STAND ALONE TUNER CONFIGURATION

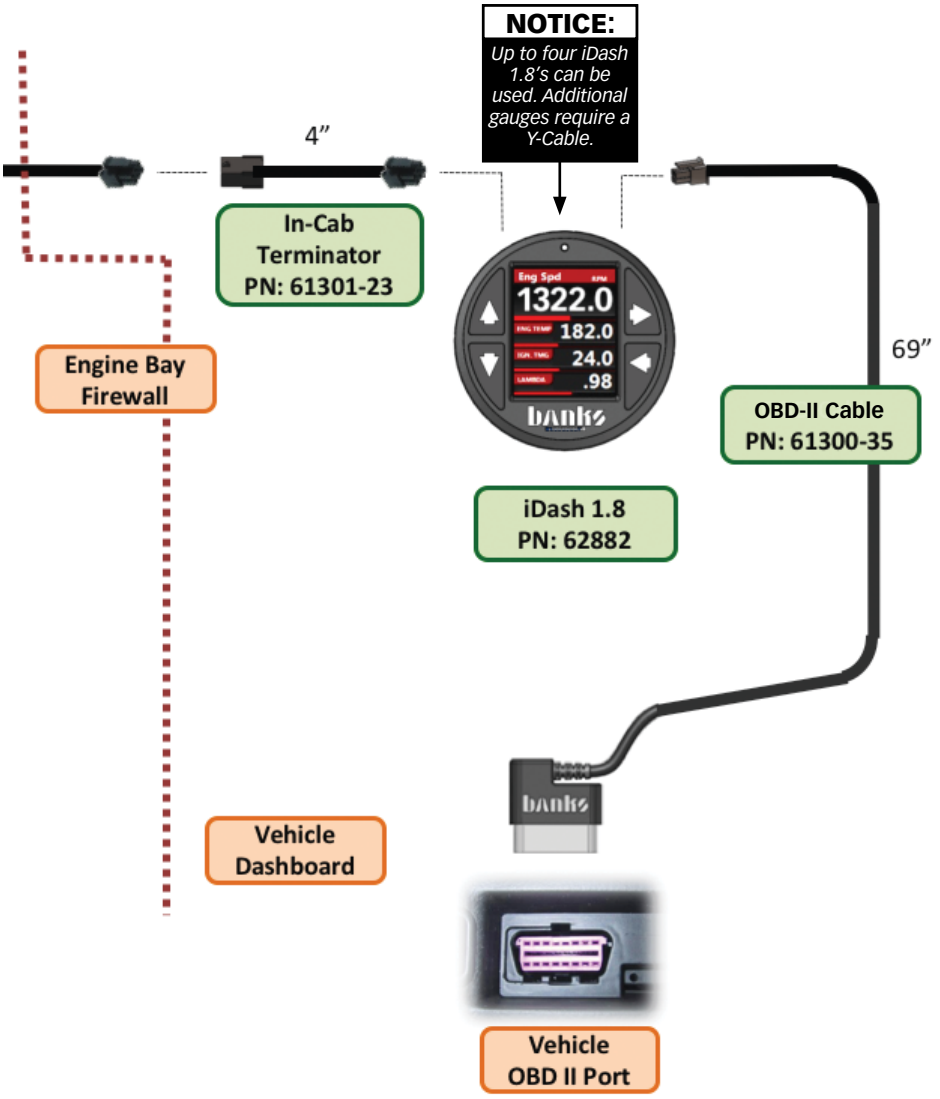



Y-Switch Cable
PN: 61301-21
3.5”
Engine Bay
Firewall
24”
69”
OBD-II Cable
PN: 61300-35
Switch Asm.
PN: 62144-10
Switch Plate
PN: 62146
SPORT
OFF
HAUL
banks
Derringer
Vehicle
Dashboard
banks
Vehicle
OBD II Port

Section 1.1 Wiring Diagram

iDASH 1.8" CONFIGURATION




NOTICE:
Up to four iDash 1.8's can be used. Additional gauges require a Y-Cable.
4"
In-Cab Terminator PN: 61301-23
Engine Bay Firewall
Eng Spd
1322.0
182.0
24.0
.98
banks
69"
OBD-II Cable PN: 61300-35
iDash 1.8 PN: 62882
banks
Vehicle Dashboard
Vehicle OBD II Port

Section 1.2
STARTER CABLE FIREWALL INSTALLATION

Starter Cable Firewall Access

WARNING

Ensure that the engine bay is cool

Remove keys from the ignition.

Disconnect the battery ground cables. Secure the cables so that they do not come in contact with the battery posts during the installation.

Required Tools & Materials

- Zip-ties (6" or longer)
- Cutting tool (i.e. Diagonal Cutters)
- Silicone Sealer (Recommended)
- Wire Coat Hanger
- Large Standard and Philips Screwdriver

1. Locate any possible passage for wire routing, inspect the firewall from under the dash (in the foot well) and from under the hood.

2. Route the Starter Cable through the firewall using the OEM wire harness grommet.

A. Locate the OEM wire harness grommet. See **Figure 1.**

B. From the engine bay side, insert a large philips screwdriver to move the grommet edge aside. See **Figure 2.**

C. Confirm the screwdriver has penetrated into the cab by checking under the dash. See **Figure 3.**

NOTE: Pushing the screwdriver through at an angle helps push the grommet lip on the other side of the firewall. Take care to not pierce the grommet.

Figure 1

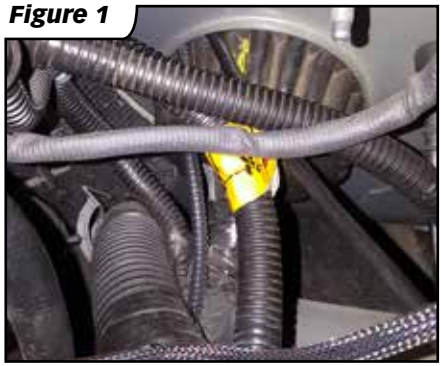


Figure 2

Section 1.2

STARTER CABLE FIREWALL INSTALLATION, *CONTINUED*

D. Remove plastic cover to access the grommet from under the dash. Unclip the sides that are indicated by the lock icon. See **Figure 3, 4.**

NOTE: Unclip the left side first. See **Figure 3.**

Figure 3

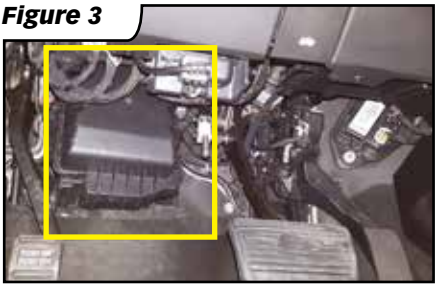
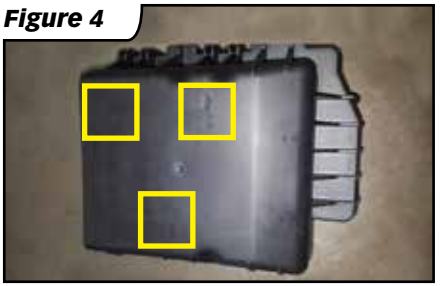


Figure 4



E. Take a wire coat hanger (or any other wire) and create a hook to pull the starter cable with, as shown in **Figure 5.**

F. On the engine bay side push the coat hanger, then the Starter Cable terminal through the grommet by hand.

G. Pull the wire coat hanger from inside the cab until the Starter Cable can be reached. See **Figure 6.**

H. Ensure there is enough of the Starter Cable length in the cab (~ 4ft) to route to the iDash 1.8 or Switch.

Figure 5

Figure 6

Figure 7

Section 1.3
IN-CAB INSTALLATION

Required Tools & Materials

- Zip-ties (4" or longer)
- Cutting tool (i.e. Diagonal Cutters)
- Large Standard Screwdriver
- Power Drill*
- #31 (0.12 Diameter) Drill Bit*
- #1 or 7/32 (0.228 Diameter) Drill Bit*

*Only for mounting switch to dash

1. Plug the OBD-II Cable into the OBD-II port located under the dash. See **Figure 8**.

Figure 8

2. Route the Starter Cable and OBD-II Cable to the dash.

3. Remove the side dash cover to store any excess wire. See **Figure 9, 10.**

Figure 9

Figure 10

For The Stand-Alone Tuner Configuration with Switch

1. Connect the Y-Switch Cable to the Starter Cable, OBD-II Cable, and Switch. See **Figure 11, 12.**

Figure 11

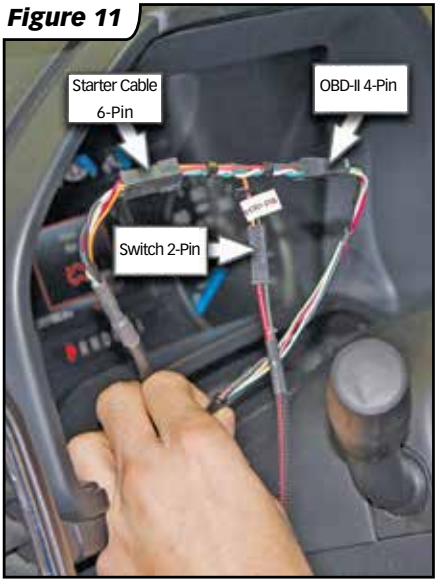
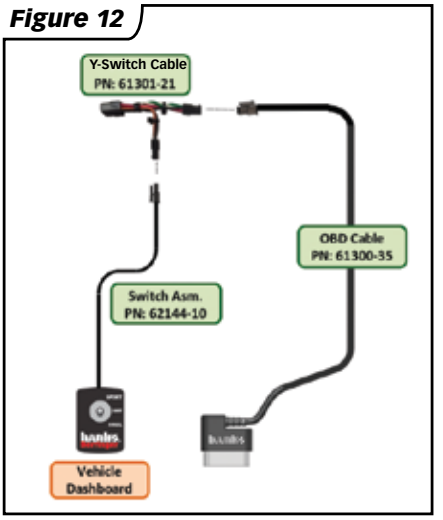


Figure 12



2. If not installing the switch back-plate, fasten the switch in any easy to access location for power level adjustment.

3. Optional switch back-plate install:

A. Install the power level plate to the switch. Make sure to align the slot of the switch with the red line on the plate towards Sport. See **Figure 13**.

Figure 13

B. Mount the switch in dashboard by drilling two holes using the supplied template. See **page 47.**

⚠ CAUTION

DO NOT damage factory wiring behind the dashboard. Inspect behind dash before drilling.

C. To keep the switch from rotating, it is necessary to install the locking tab washer behind the dash, with the locking tab facing the backside of the dash face.

For iDash 1.8" Configuration

1. Install the iDash gauge in an A-pillar, steering column, or suction cup windshield-mount gauge-pod.

2. If using a single iDash Gauge:

A. Connect the In-Cab Terminator to the iDash 6-Pin Port. See **Figure 14, Step 2A.**

B. Connect the Starter Cable to the In-Cab Terminator. See **Figure 14, Step 2B.**

Figure 14

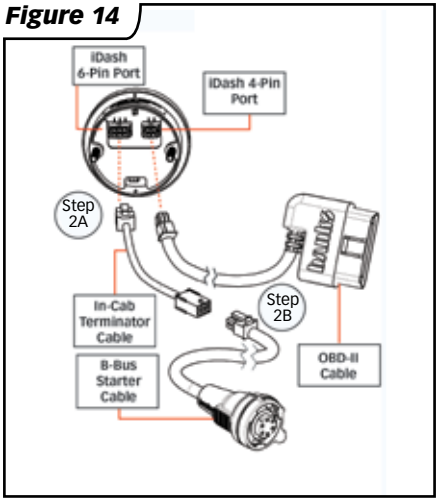
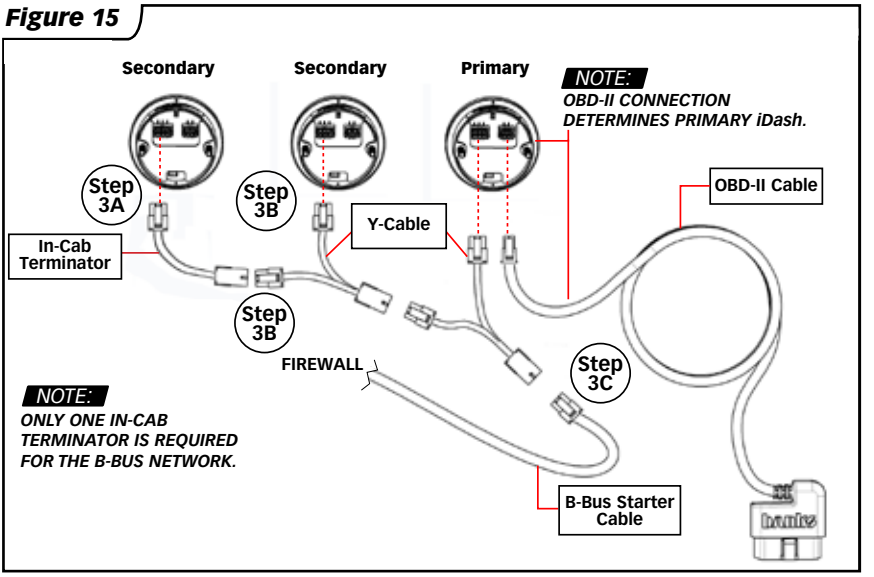


Figure 15



3. If using multiple iDash Gauges:

A. Connect the In-Cab Terminator to the iDash 6-pin port. See **Figure 15, Step 3A.**

NOTE: Only one In-Cab Terminator is required.

B. Connect the Y-Cable to the In-Cab Terminator and the second iDash. See **Figure 15, Step 3B.**

NOTE: For each additional iDash Gauge, a Y-Cable is used. See **Figure 15.**

C. Connect the Starter Cable to the Y-Cable. See **Figure 15, Step 3C**.

Section 1.4

DERRINGER SENSOR HARNESS INSTALLATION

Required Tools & Materials

- Zip-ties (6" or longer)
- Cutting tool (i.e. Diagonal Cutters)
- Pliers
- Large Standard and Philips Screwdriver
- Push-Rivet Removal Tool
- 8mm, 10mm, 13mm Sockets
- 1/4" Drive
- (Optional) Throttle Body Gasket [GMPN: 12665248]

To connect to the Fuel Rail Pressure (FRP) sensor, access to behind the Throttle Body must be made.

1. Remove the Intake Duct/Turbo Inlet Duct. See **Figure 16, 17.**

A. Loosen the hose clamps.

B. Pull out the Intake/Turbo Inlet Duct.

Figure 16

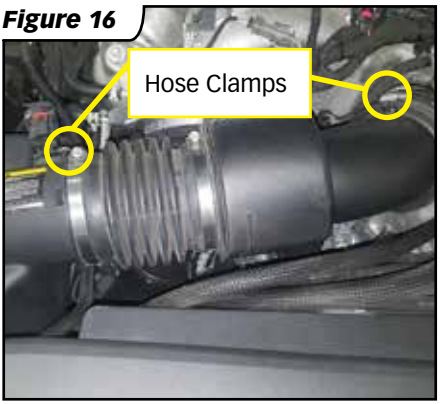
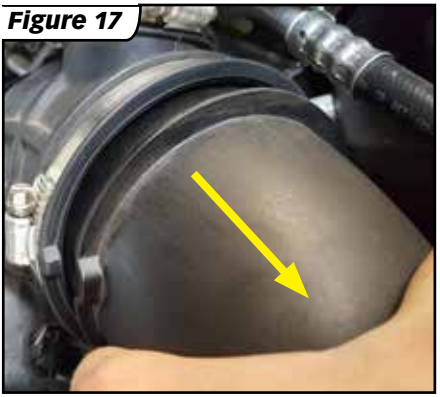


Figure 17



2. Cover the Turbo Inlet with a clean rag to prevent foreign objects from entering. See **Figure 18.**

Figure 18

Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

NOTE: Disconnect the battery ground cables. Secure the cables so that they do not come in contact with the battery posts during the installation. See **Figure 19.**

If the ECU is powered on when the sensors are disconnected, your vehicle will show diagnostic trouble codes.

Figure 19

3. Disconnect the Intake Air Temperature (IAT) sensor from the Airbox Cover.

A. Pull the connector's red locking tab. See **Figure 20.**

B. Push down on the black tab and pull the connector off. See **Figure 21**

Figure 20

Figure 21

Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

4. Remove the harness' push-mount cable-ties to from the Airbox flange. See **Figure 24, 25.**

Figure 22

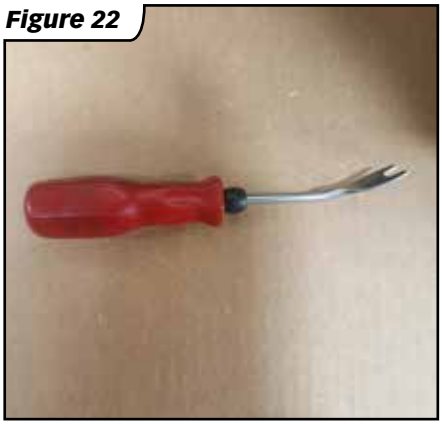
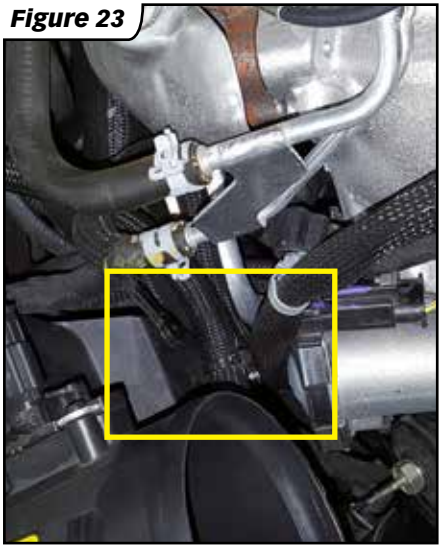


Figure 23



TIP: Use a push rivet removal tool or a screw driver to pry them out. See **Figure 22, 24.**

Figure 24

Figure 25

Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

5. Remove the Airbox.

Pull up on the Airbox to disconnect rubber lugs from the steel plate mount. See **Figure 26, 27.**

Figure 26

Figure 27

7. Disconnect the Intercooler Outlet Duct's temperature sensor connector. See **Figure 28, 29.**

Figure 28

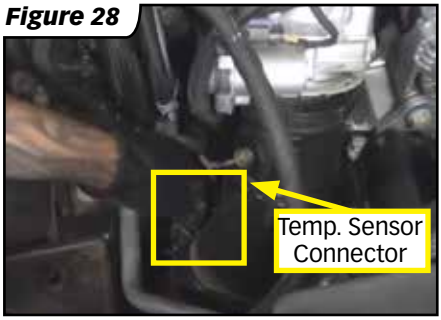
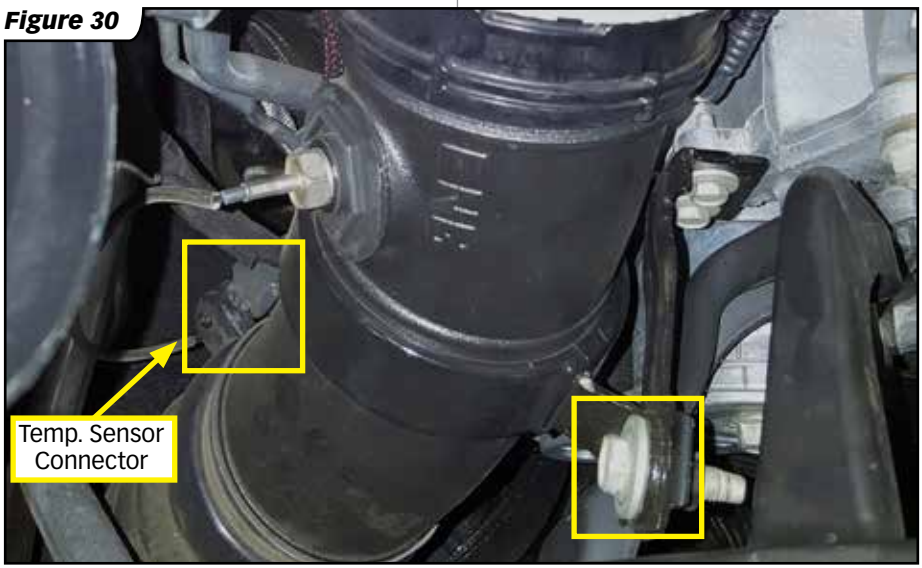


Figure 29

8. Unbolt the Intercooler Outlet Duct flange using a 13mm socket/wrench. See **Figure 30.**

Figure 30



Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

9. Disconnect the Intercooler Outlet Duct from the Throttle Body. See **Figure 31, 32.**

A. Rotate the Gray Locking Ring clockwise (~10°). until it stops. Keep in rotated position while pulling down on the duct for removal.

TIP: If the duct is too difficult to pull off, ensure the Gray Locking Ring is rotated clockwise and use a large screwdriver to pry the duct off the Throttle Body. DO NOT exert excessive force to prevent damage.

Figure 31

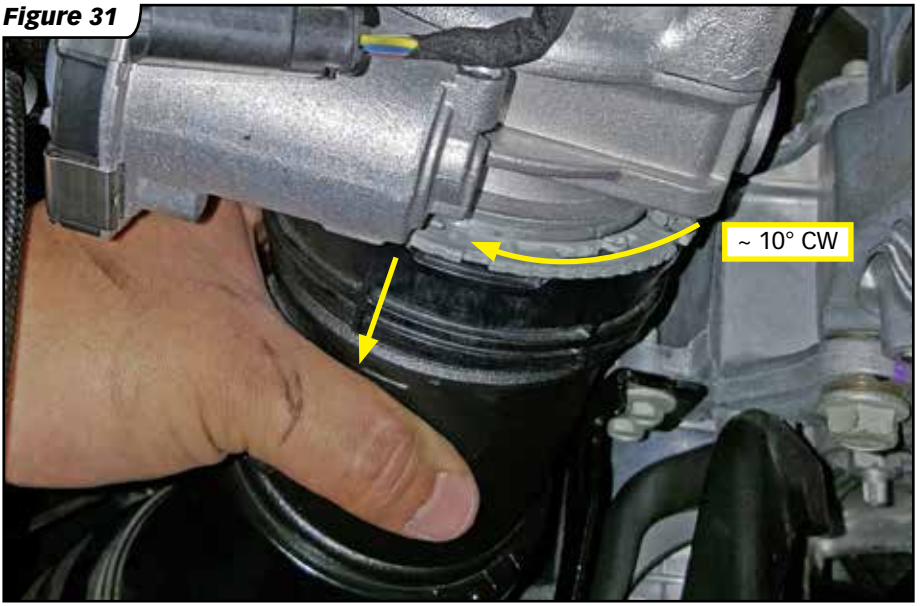
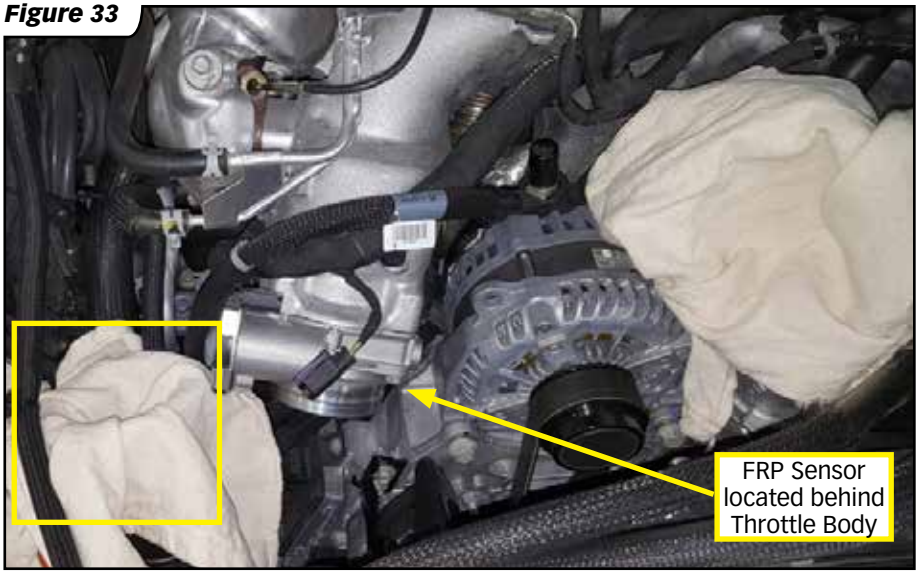


Figure 32

10. Cover the Intercooler Outlet Duct with a clean rag to prevent foreign objects from entering. See **Figure 33.**

Figure 33



NOTE: If it is too difficult to access the FRP connectors you can remove the throttle body.

Before removing the Throttle Body, it is recommended to have a replacement gasket ready.

To remove the throttle body, first disconnect the Throttle Position Sensor (TPS). Then remove the 4 bolts holding the Throttle Body in place with a 10mm deep socket wrench.

When reinstalling, be sure to replace the gasket (GMPN: 12665248) and ensure to torque the bolts to 89 lb-in (7 to 8 lb-ft).

Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

11. Remove the harness' push-mount cable-tie from the flange, then disconnect the FRP sensor from the OEM harness.

TIP: Use a pick to unlock the connectors red locking tab. See **Figure 34, 36.**

NOTE: Not all FRP sensors will face the pictured directions. See **Figure 35,36.**

Figure 34

Figure 35

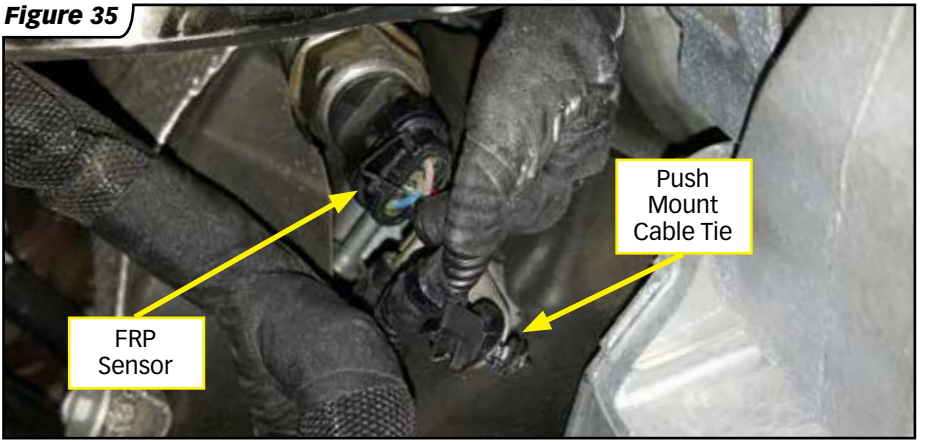


Figure 36

Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

13. Connect the Derringer Harness to the FRP sensor and the FRP connector on the OEM harness. See **Figure 37.**

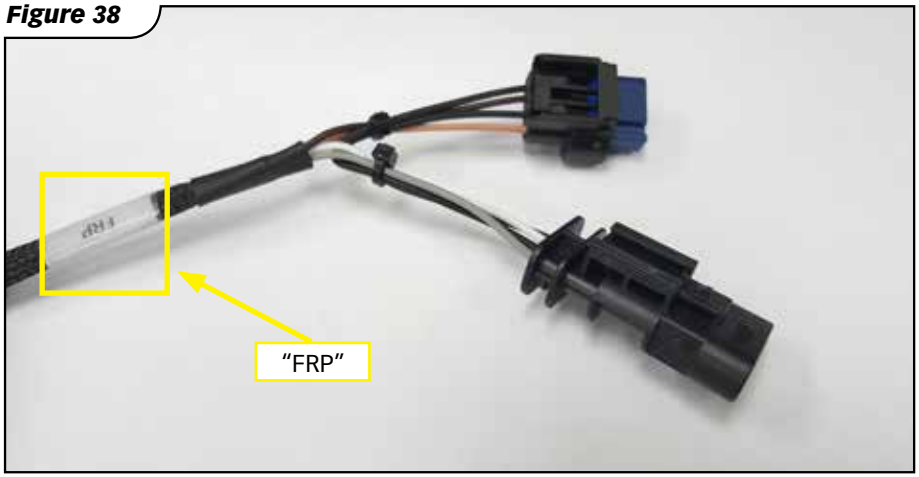
NOTE: Push the locking tab for both connections.

⚠ CAUTION

Damage can result with improper connection. Ensure you are using the FRP connectors by checking the label (See **Figure 38**).

Figure 37

Figure 38



Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

14. Route the Derringer harness along the OEM harness. See **Figure 39.**

Figure 39

Figure 40

Figure 41

Figure 42

15. Undo the locking tabs and connect the Derringer Harness to the TMAP sensor and TMAP connector on the OEM Harness. See **Figure 43, 44.**

TIP: If it is too difficult to remove the connector, wedge a small screwdriver between connector latch to get it over the wedge lock. See **Figure 45, 46.**

Figure 43

Figure 44

Section 1.4

INSTALLATION OF DERRINGER SENSOR HARNESS, *CONTINUED*

16. Connect the Derringer Harness to the TMAP sensor and the TMAP OEM harness connector.

17. Connect the Derringer Harness to the TMAP sensor. See **Figure 45**

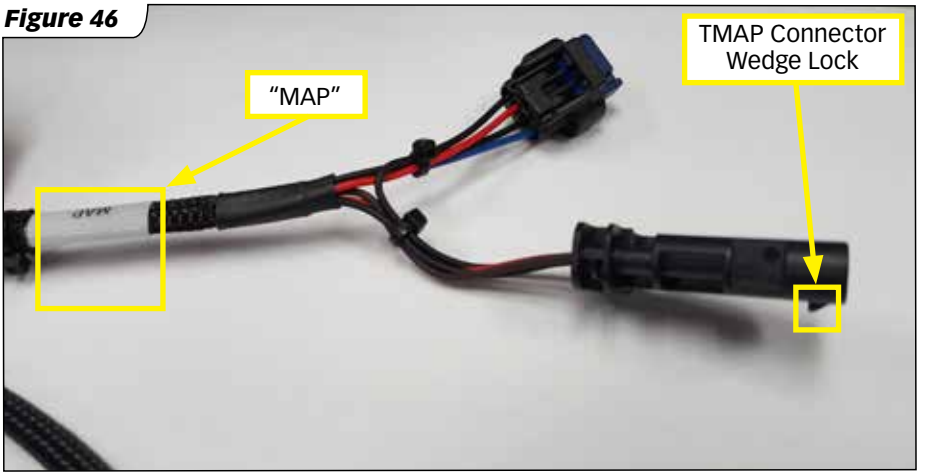
Figure 45

⚠ CAUTION

Damage can result with improper connection. Ensure you are using the **MAP** connectors by checking the label (**Figure 46**).

Wedge lock on the female TMAP connector (Derringer Harness) must be oriened on the same side as the OEM harness connector's locking tab (red).

Figure 46



17. Route the rest of the Derringer harness along the OEM harness. See **Figure 47, 48, 49, 50.**

NOTE: The pictured mounting location of the Derringer Tuner is optional. It is best to mount close to the firewall and route the harness along the OEM harness.

Figure 47

Figure 48

Figure 49

Figure 50

18. Check all sensor and harness connections before installing components back.

19. If the Throttle Body was removed, place the new gasket (GMPN: 12665248) on it and position the Throttle Body to thread the bolts (x4) in by hand. Then torque the Throttle Body to 89 lb-in (7 to 8 lb-ft).

20. Remove the rag and install the Intercooler Outlet Duct.

A. To properly insert and lock the duct, rotate the Gray Locking Ring counter-clockwise.

B. Once inserted properly, rotate the Gray Locking Ring counter-clockwise to secure.

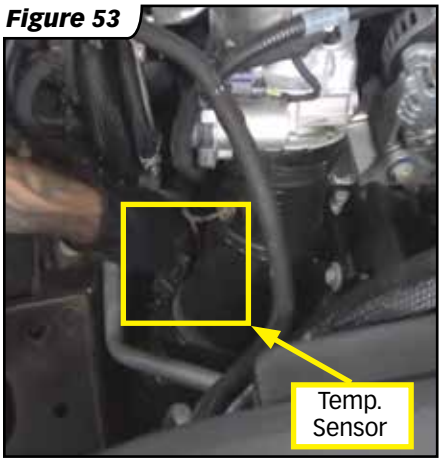
C. Then insert the duct's flange bolt and tighten.

Figure 51

Figure 52

21. Connect the Intercooler Outlet Duct's temperature sensor and place the connector back on its mount.

Figure 53



22. Install the Airbox. See **Figure 54, 55.**

A. Insert the Airbox into position over the steal plate without pulling any hoses.

B. Push down on the Airbox until all rubber plugs insert into the steal plates holes.

Figure 54

Figure 55

23. Insert the harness' push mount cable ties back into the Airbox Flange (See **Figure 57**). Optionally, for best practice, you can install new push-mount cable-ties.

Figure 56

Figure 57

24. Connect the IAT sensor connector to the Airbox. See **Figure 58.**

NOTE: Push the red tab to lock the connector.

Figure 58

25. Install the Intake Duct/Turbo Inlet Duct, while aligning the lip on each side. Then tighten the hose clamps. See **Figure 59, 60.**

TIP: Use an 8mm socket or screwdriver to tighten the hose clamps.

Figure 59

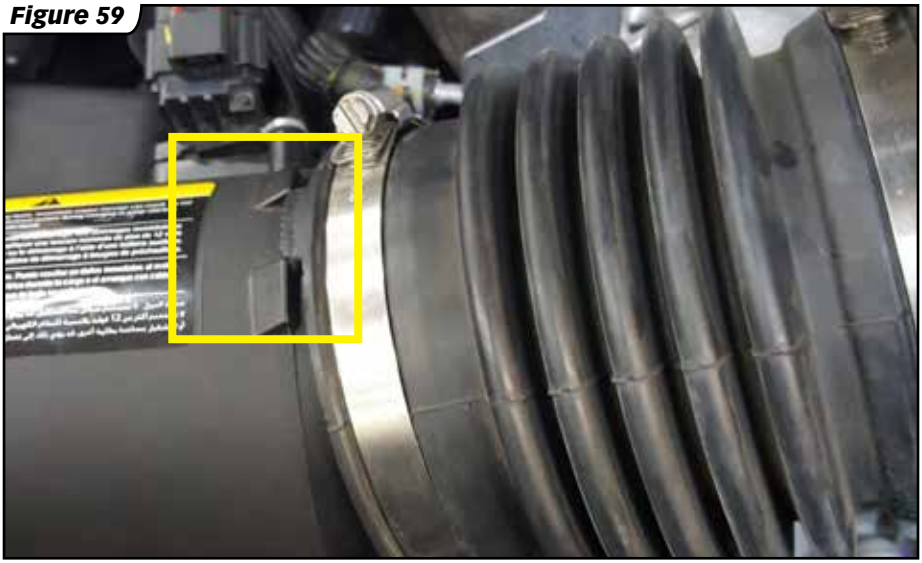


Figure 60

Section 1.5

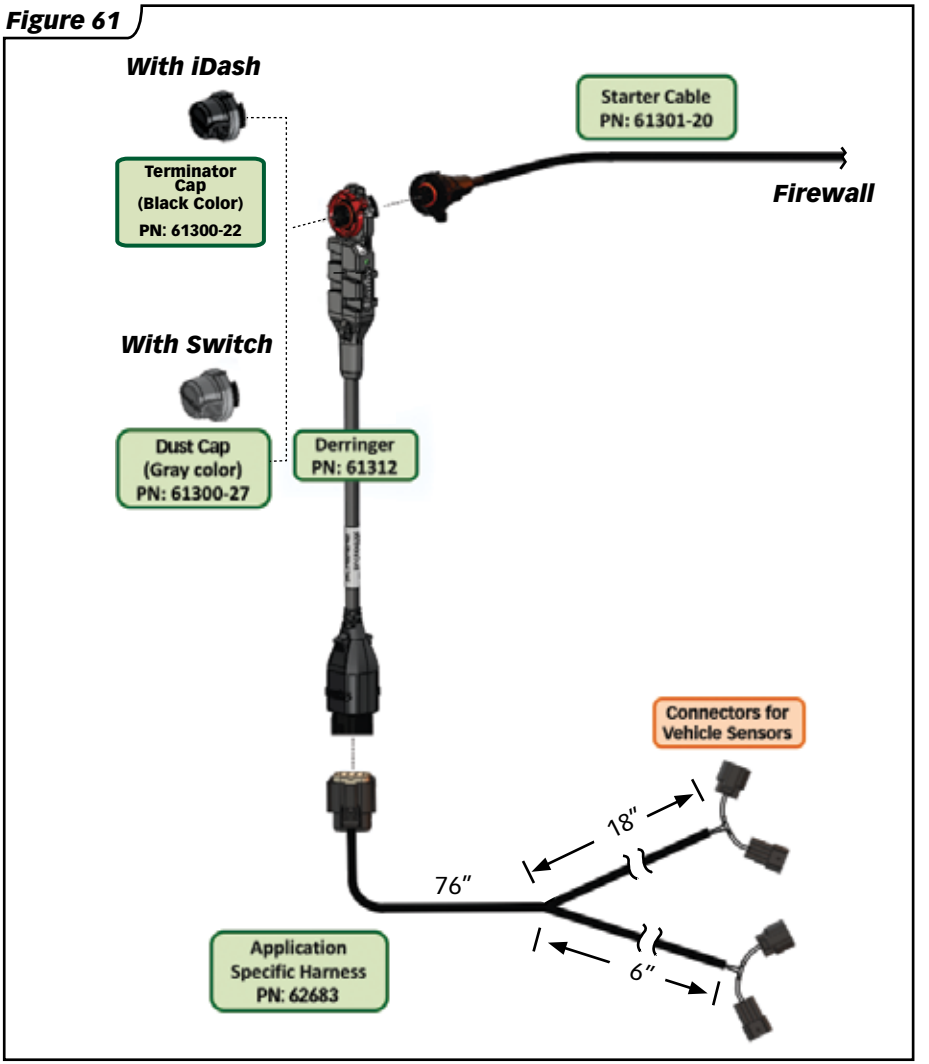
DERRINGER MODULE INSTALL AND CONNECTION CHECK

1. Connect the **Derringer Module** to the **Derringer Sensor Harness** and the **Starter Cable**. See **Figure 61.**

2. **If using the 3-position switch**, install the **Gray Dust Cap** on the **Derringer Module**. See **Figure 61.**

3. **If using the iDash 1.8**, install the **Black Terminator Cap** on the **Derringer Module.** See **Figure 61.**

Figure 61



4. Rotate the locking ring towards the 12 o'clock position then connect the mating ends together ensuring proper alignment using the 12 o'clock marks. See **Figure 62**

Figure 62

5. Then rotate the locking ring towards the lock icon until you feel a click. See **Figure 63.**

Figure 63

6. Locate a place to secure the Derringer module near or along the fender, then zip-tie it in place. Secure any extra cable of the Derringer Sensor Harness.

NOTE: The pictured mounting location of the Derringer Tuner is optional. It is best to mount close to the firewall and route the harness along the OEM harness.

7. Check all connectors for proper installation, then connect the battery terminal(s).

Figure 64

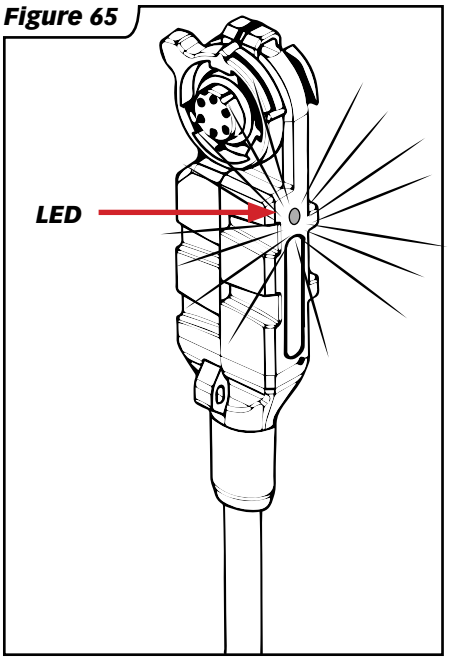
Check for proper device operation.

1. While the engine is running, check the LED indicator on the derringer.

A. Under proper operation the LED will be blinking green.

B. If the LED is always off or blinking Red refer to "**Section 3: Troubleshooting**" on **page 43.**

Figure 65



2. If connected to the iDash Gauge, load the "**Derringer**" layout (See **Figure 66**) and use the **UP** and **DOWN** arrow buttons to adjust the power level settings. See **Figure 67.**

If the power level cannot be adjusted, refer to "**Section 3: Troubleshooting**" on **page 43**.

Figure 66

SECTION 2.0

Derringer Tuner Operation

Section 2.0
DERRINGER TUNER OPERATION

Setting Desired Power Level:

The Derringer is equipped with multiple power levels. You can set the desired power level while the engine is running but it is recommended that you do not switch the power level under high load applications.

Switch configuration:

There are 3 power levels (Sport, Plus and Stock) when configured with a switch.

iDash 1.8 configuration:

When the Derringer is connected to an iDash 1.8, there are a total of 6 power levels (level 6, 5, 4, 3, 2 and stock). The power level can be changed by pressing the **UP** and **DOWN** buttons at any time. If you have the derringer layout loaded, you will see the power level change at the bottom left corner (See **Figure 67**). If you have any other layout loaded, a message box will pop up to notify you of the power level change.

Figure 67

SPORT MODE/LEVEL 6 (switch up/towards slot)

This mode is to be used when peak engine performance is required. This mode has been optimized for maximum power output and is tuned to increase fuel deliver and boost to provide maximum power output of the engine along with improved turbo response.

PLUS MODE/LEVEL 3 (switch down/away from slot)

The plus calibration is designed for use in everyday driving. This power level adds a noticeable punch under high load acceleration by improving turbo response and power. Power in this mode can be sustained for a prolonged duration.

STOCK MODE (switch middle)

Stock mode turns OFF your Derringer tuner. Throttle response and power return to stock levels.

Banks ActiveSafety®

Anytime aftermarket electronics are introduced to your vehicle, it is important to know that they are not going to cause damage. Banks builds in a suite of ActiveSafety features to safeguard your vehicle:

» Software that monitors and diagnoses itself to ensure proper function.

» Self-monitoring hardware that provides automatic bypass should something malfunction.

The Derringer tuner module monitors multiple parameters and adjusts its output controls to protect the driveline. The Derringer module monitors engine coolant temperature (ECT) and will limit the additional power that it provides anytime the ECT is outside of optimal operating range to protect the engine.

Power Added %:

If connected to an iDash 1.8 and on the "**Derringer**" layout, the vertical bar graph on the right hand side represents in real time how much power the Derringer is adding. See figure (**Figure 68**) In stock mode there will be no change to the bar graph and in Level 6 the bar graph will reach 100% under proper operating conditions. % power added is effected by safety features such as Engine Coolant Temperature, Exhaust Gas Temperature, Regen., and various transmission parameters, so it might not always fully reach 100%. The Power Added data can also be displayed on ANY layout as a numeric value by selecting it from the "**Derringer**" category of parameters.

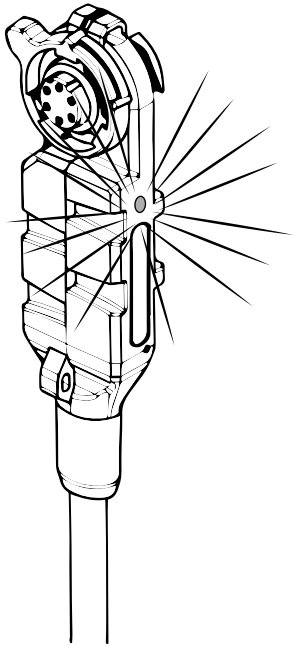
Figure 68

SECTION 3.0

Troubleshooting

Section 3.0
TROUBLESHOOTING

Normal Operation



Your Derringer Tuner has a built-in, self-diagnostic system. The status of the diagnostic system is communicated via the LED on the module. When the Derringer module is functioning properly the LED will flash green.

Derringer Not Powered

When the LED is not illuminated, the Derringer module is not powered on. If the ignition is on and the LED is not illuminated, check the TMAP connections the vehicle and ensure they are fully engaged.

No Communication with iDash 1.8

Check that your wiring matches the figure in **Section 1.1 Wiring Diagram: iDash 1.8" Configuration** (See **page 10**) or for multiple iDash 1.8 Gauges see **Figure 15** on **page 17.** A common error is that the wrong cap is attached to the Derringer. A Black Termination Cap must be connected to the Derringer and one In-Cab Termination Cable should be attached to one of the iDash 1.8's.

LED Error Code

When faults are detected, the Derringer module will flash a diagnostic code. These diagnostic codes are comprised of 2 digits. Each digit is expressed by the flashing red LED.

A code can be determined by counting the number of red flashes displayed before the LED flashes green. This is the first digit. The number of red flashes after the LED flashes green is the second digit. After the diagnostic code is displayed, additional codes will be displayed in sequence.

Once all codes are displayed the system we begin sending the codes again. The display of the codes is separated by a longer period of the LED not being illuminated. Once you have written down all diagnostic codes being displayed, consult the following tables for a description of the code along with the action to be taken.

61312-51 Derringer Tuner (GM L5P application)

Code	Event	Course of Action
1,1	Fuel Rail Pressure (FRP) Input Voltage Out of Range.	Turn ignition OFF & check the male and female FRP sensor connectors. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.
1,2	Manifold Absolute Pressure (MAP) Input Voltage Out of Range.	Turn ignition OFF & check the male & female MAP sensor connectors. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.
1,4	Fuel Rail Pressure 2 (FRP2) Input Voltage Out of Range.	Turn ignition OFF & check the male and female FRP sensor connectors. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.
2,1	Fuel Rail Pressure (FRP) Output Voltage Out of Range.	Turn ignition OFF & check the male & female FRP sensor connectors. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.
2,4	Fuel Rail Pressure 2 (FRP2) Output Voltage Out of Range.	Turn ignition OFF & check the male & female FRP sensor connectors. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.
3,2	Internal Module Malfunction or Intermittent Power.	Turn ignition OFF & check the male and female FRP sensor connectors. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.

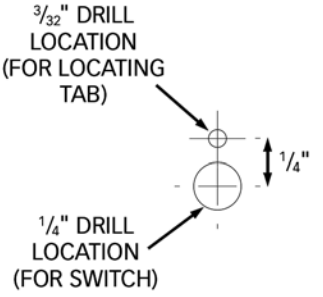
61312-51 Derringer Tuner (GM L5P application) cont'd

Code	Event	Course of Action
3,4 / 3,5	OBD-II / Banks Bus CAN Communication error	Turn ignition OFF & check the following connections (as applicable): 1) 61300-35 OBD-II Interface Cable - at 16-pin vehicle OBD-II & 4-pin inter-cable connectors. 2) 61301-21 Y-Adapter Cable - at 4-pin inter-cable & 6-pin inter-cable connectors. 3) 61301-20 B-Bus Starter Cable - at 6-pin inter-cable & 6-pin B-Bus Circular connectors. 4) 61300-22 B-Bus Terminator Plug - at 6-pin B-Bus Circular connector. Turn ignition back ON & re-check for presence of code. If code does not re-appear at key ON, start engine & check for presence of code both at engine idle & under varying driving conditions.
4,2	Excessive Transmission Slip Detected	If speed sensor readings are incorrect, see speed sensor DTC. If the transmission fluid level is incorrect, correct the fluid level. If the TCC clutch is not applied, inspect the torque converter clutch system wiring, pressure, and controls. If the clutch is slipping, rotating clutch seals are leaking, and the clutch plates are worn, inspect clutch plates, piston seals, and rotating seals. Take your vehicle to your mechanic for inspection/repair.
4,5	Excessive Torque Converter Clutch Slip Detected	Shift solenoid valve performance DTC's, in conjunction with P0894, may indicate incorrect fluid level. Incorrect gear ratio DTC's may indicate clutch damage. Take your vehicle to your mechanic for inspection/repair.

Section 4.0
BANKS POWER DECALS

Figure 69

Mount switch template
(step 3 on page 15)



Gale Banks Engineering
546 Duggan Avenue • Azusa, ca 91702
(626) 969-9600 • Fax (626) 334-1743

Product Information & Sales: (888) 635-4565
Customer Support: (888) 839-5600
Installation Support: (888) 839-2700

bankspower.com