

Approx. Install Time 3Hrs 00Min

## Installation Instructions

#### **Vehicle Application**

Year: 2013 - 2016 Make: Ram

Model: 2500/3500 Diesel Engine: 6.7L Cummins

### **Tools Required**

- 7mm, 8mm, 10mm, & 13mm Wrench & Socket 1/8" Allen Key (Supplied w/ Kit), 3/16" Allen Key T27 Security Torx Wrench 5/16" Nut Driver or Flat Blade Screwdriver Phillips Screwdriver, Pliers or Channel locks 5/16" Drill bit and Drill Flectrical Tane
- **Electrical Tape** Razorblade

S&B Filter Maintenance
Cleanable (KF-1037). If the enclosed filter is Red, it came pre-oiled from the factory. Please visit <a href="https://www.sbfilters.com">www.sbfilters.com</a> for exact oil amount required after cleaning.

Disposable (KF-1037D) If the enclosed filter is White, it is a disposable filter and should be discarded once it reaches capacity. This filter (does not require oil). For more info on S&B's disposable filter, visit www.sbfilters.com.

#### **Notes**

Kit may not fit with the following Aftermarket Parts installed:

- Body Lift or Lowering Kit
- Custom Hood
- Intercooler or Turbo upgrades

#### CARB Status - Pending

Product will be submitted to Air Resources Board for approval shortly.

Not legal for use in CA or other states adopting CA emissions standards See Page 6 for more info.

### Before You Start

- Please read the entire product guide before proceeding. Ensure all components listed on page 4 are present.
- If you are missing any of the components, call customer support at (909) 947-0015.
- Do not work on your vehicle while engine is hot.
- Make sure the engine is turned off and the vehicle is in Park or the Parking Brake is set.

1. With the ignition switched off and the parking brake set, disconnect the negative battery cables on both batteries.



2. Disconnect the electrical connection for the Intake Air Temp. (IAT) Sensor and the Mass Air Flow (MAF) Sensor then unsnap the wire loom from the tube. (See the next step for removal)



3. For the MAF sensor, slide the red locking tab up then depress the black lever while disengaging the connector. For the IAT sensor just depress the grey lever while disengaging the connector.



 ${f 4.}$  Loosen the hose clamp at the turbo inlet, next pinch the spring clamp and slide it up the steel piping. Then disconnect the silicone hose from the steel piping and remove spring clamp. Note: On the 2016 models, there might be some rubber around the spring clamp holding it in place. You will have to tear or cut this piece so it



5. Loosen the hose clamp on the intake tube to assist with the removal of the air box.



6. Remove factory retaining bolt on the front of the factory air box. Once retaining bolt is removed disconnect hose clip by pulling up and then move hose forward to help remove air box. (See Below)



7. Lift up on factory air box, be careful not to remove the whole box because the swing gate motor harness is still connected on the side of the air box. Remember to move the hose forward from Step 6 when pulling out the box.



8. Disconnect the sensor from the Factory Swing Gate Motor (L) that is located on the side of the factory air box. Press in the locking button on the connector and pull out.



9. Once the sensor is disconnected, completely remove the factory air box and intake tube by lifting up and out.

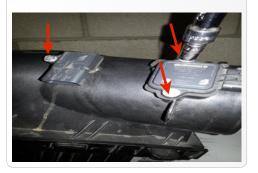


#### SEE EXPLODED VIEW ON PAGE 6



# Installation Instructions (continued)

10. Remove the MAF sensor and IAT Sensor from the factory air box by removing the three factory bolts.



11. Place MAF sensor and IAT Sensor onto the Intake Tube (X) using the 8-32 pan Head Screw (U) and Gasket (V&W).



12. Remove the Factory Swing Gate Motor (L) from the side of the factory air box using a T-27 torx key.



13. A good amount of force may be required to remove the motor from the factory air box. The motor shaft may need to be rotated while removing from the factory butterfly valve in the factory air box Grab both the butterfly valve and motor and twist while pulling out.



14. Mount the swing gate motor onto the bottom of the Intake Air Box (I) using Spacer (K) and #10-24 Screw (M) and #10 SS Washer (BB).



15. Construct the S&B Swing Gate Dam to Arm (N&S) using the provided hardware (O,P,&R) and using the provided Allen Key (AB). If you desire to have both inlets open in the air box skip this step. Warning: The Dam (N) must be installed during harsh weather including but not limited to rain, ice, sleet or snow; or engine damage could result.



16. Install the provided Inlets (G&J) and Tube Seal (Q) into the Air Box (I) by inserting and snapping into place. A bit of force and effort may be necessary to install inlets and seal. Line up each part with the dot on the box.

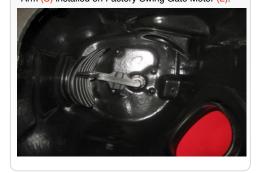




 $17.\,$  When placing the Swing Gate Arm (S) onto the Factory Swing Gate Motor (L) please make sure the flat side of the swing gate arm is placed correctly on the flat side of the motor shaft. Push down on diverter base all the way down till it snaps into place.



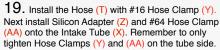
18. Note: Do NOT remove Swing Gate Arm (S) after installing it to the motor as this could damage the snap in feature of the arm. If removal of Swing Gate Dam (N) is desired, remove with Swing Gate Arm (S) installed on Factory Swing Gate Motor (L).



the Swing Gate Arm (S) removed or a
Active Air Box Error message will occur.
In the event that you receive the Active
Air Box Error message, you will need a
reset kit (HP1321-00). Please visit our
website or contact S&B Filters for more

website or contact S&B Filters for more information. The Dam (N) can be removed during good weather conditions, see #19 above. Never manually rotate the arm once it is installed on the motor shaft, doing so will damage the swing arm.

Warning: Never operate the vehicle with





20. Install Intake Tube (X) into Air Box (I) by sliding the tube through the Tube Seal (Q). This should be a snug fit. A perfect seal is not required.





# Installation Instructions (continued)

21. Before installing the Air Box (I) and Intake Tube (X) assembly, connect the Extension Harness (AG) to the Factory Swing Gate Motor (L). Then connect the factory sensor to the back end of the Extension Harness (AG)



**22.** Place the Air Box (I) with air tube assembly into vehicle.



23. Install the Hose (T) with #16 Hose Clamp (Y). Next install Silicon Adapter (Z) and #64 Hose Clamp (AA) onto the Intake Tube (X). Remember to only tighten Hose Clamps (Y) and (AA) on the tube side.



24.(a) When fitting the S&B intake box into the vehicle please make sure that the stand-off post on the bottom of the air box fit properly into the holes on the air box tray in the vehicle.



24.(b) Reach under the air box to feel if the posts pushed through the holes (grommets). Be careful not to push to hard or the tabs will break off the battery tray.



25. After dropping in the box move hose forward to let the box drop down completely. Once box is dropped flush reconnect hose clip to the vehicle.



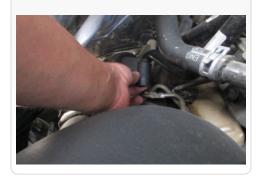
**26.** Push down on air box and tighten the provided Retaining Bolt (H). If the bolt does not align correctly please go back to step 36 to make sure the box is set correctly.



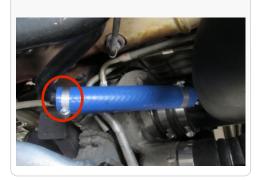
27. Connect Silicon Adapter (Z) to turbo and tighten #64 Hose Clamp (AA). Please make sure the coupler is push all the way onto turbo before tightening completely.



28. Install the Hose (CC) onto the crankcase ventilation line.



29. Slide the Hose (T) completely over the sleeve and tighten #16 Hose Clamp (Y).



30. Reconnect the MAF and IAT sensor.



31. Reinstall the S&B Air Filter (E), please make sure to install with flat side up and feed the filter onto tube and push down. Once installed, tighten the #72 Filter Hose Clamp (F).



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# Installation Instructions (continued)

32. Remove the protective covering from the Lid (D).



33. Install the provided Edge Trim (C) around the lid. Once edge trim is installed roll the sides of the lid on a flat surface to ensure a tight seal. Once edge trim is installed roll the sides of the lid on a flat surface to ensure a tight seal.



34. Install the Lid (D) using the four #10-24 Screw (A) and Sealing Washer (B).



35. Reconnect both batteries



36. The Installation is now complete.



Our active monitoring light alerts you when the ram-air gate is open.



### Precision II Filter Cleaning & Oiling



 $through\ your\ local\ S\&B\ distributor.$ Part #: 88-0008

# RELATED ITEMS FOR YOUR

- Replacement Air Filter (Oiled) (S&B P/N: KF-1037)
- Replacement Air Filter (Dry) (S&B P/N: KF-1037D)
- Air Filter Wrap (S&B P/N: WF-1037)

# **PURCHASE**

# Order online today at www.sbfilters.com or

#### Performance Testing

- Engage parking brake and start your engine. Listen for abnormal noises. If an air leak is detected, re-inspect hoses and connections as they may need to be repositioned and tightened. S&B FILTERS recommends that you keep your OE intake system in the event it is required in the future.

  In order to maintain your warranty, all connections and components must be checked periodically for alignment and for proper tension on all connections. Failure to do so may void your warranty.

- Use only S&B FILTERS cleaning and oil products to service your filter. Using any other brand oil and or cleaners on your S&B air filter may void your warranty.

### Warning!

If your vehicle has a Vehicle Emission Control Information decal affixed to the factory airbox, a new replacement label must be obtained and installed in a readily visible position in the engine compartment in order to remain CARB compliant. Failure to do so will prevent the vehicle from passing a smog check.

Replacement labels can be ordered from your local dealership. Regulations state that the VECI label shall not be affixed to any equipment which is easily detached from the vehicle. Label placement, under the hood on a painted surface is recommended.



Emissions Standard

The California Air Resource Board (CARB) requires that an E.O. identification label be applied to the vehicle in order to pass a smog check inspection when a Performance Intake Kit has been installed. You must place the E.O. label provided on or near the intake kit after installation so that a smog check technician can easily verify the E.O. number. As of April 2009, S&B has never had a product where CARB denied an exemption request; however, the exemption process with CARB can take as long as 18 months. Check the status of the exemption process by looking up a specific part number at <a href="https://www.sbfilters.com">www.sbfilters.com</a>. The CARB Exemption number and/or status is listed under the Product Details section for each part number. If the status shows as "Pending," CARB has yet to issue an exemption but the product has been submitted. Products that have not been issued an EO number are street legal in most states, but may not be used on emission controlled vehicles in the state of California and are for off road use only. If you purchased your kit from S&B Filters directly, we will automatically mail you your Exemption Sticker when it is issued to us. If you purchased your kit from an authorized S&B Filters Dealer, log onto our web site and register to receive your Exemption Sticker.

#### **SEE EXPLODED VIEW ON PAGE 6**



# Installation Instructions (Optional Step)

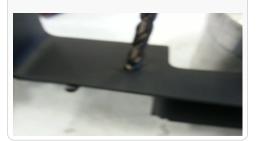
Active Monitoring Light Install Light may be installed if desired, we recommend on the trim of the instrumentation panel inside the cab (Warning: drilling of the instrument panel will be required)

**A.** Choose a location to drill a hole to install the monitoring light.



D. Carefully drill a hole using a 5/16" drill bit, use lower rpm speeds and start hole with smaller bits

like a 1/8" or 3/16" to avoid damage to panel.



**G.** Reinstall panel, again steering column and gear shifter may need to be lowered to install



J. Pull wire through fire wall and run wire through the vehicles wire/cable guard. A



M. This is a photo of how the indicator wire will be connected into the swing gate motor harness wires. The Red will connect to the Brown w/ Pink and the Black will connect to the Black wire. (See illustration on next step)



**B**. Remove panel by first removing the 4 Torx screws under top part of instrument panel.



E. Install Monitoring Light (AD) into the drilled out hole, screw the locking nut onto the back of the panel by running the wire through the nut.



**H.** From under the hood on the driver side firewall, carefully insert a screw driver on the side of the rubber boot to help run the indicator wire through.



**K.** Below is a photo of the wire being ran through the wire/cable guard. Remember to lock tabs when finished running wire through.



N. Use the provided 3M Quick Splice (AE) to tap both wires together using pliers. Tap the RED wire into the Brown w/Pink wire and tap the Black into the Black wire on the harness. Swing Gate Motor Harness



**C.** Once Torx are removed pull down and out to remove panel. (lowering of shifter and steering wheel may be required).



**F.** Before re-installing the panel run the indicator light wire down through the steering column to the bottom of the dash.



**I.** From under the dash run the wire through fire wall to the outside were the screw driver enters the firewall, use zip ties to fasten down the indicator wire as needed.



**L.** Once done running the wire through the guard, run wire down along the side of the battery. It is recommended to run the wire through the swing gate motor harness.



**M.** Photo of finished harness with the correct wire taps. It is recommended to use zip ties on lose wires and to also use electrical tape over the tap connectors for added protection.



SEE EXPLODED VIEW ON PAGE 6



# **Exploded View**



ITEM	QTY.	DESCRIPTION	P/N
Α	4	S.S. Screw #10-24 x1/2"	Al1539-00
В	4	Sealing Washer #10	Al1540-00
С	1	Edge Trim	Al1636-01
D	1	Lid	Al1613-00
E	1	S&B Air Filter	KF-1037
F	1	Filter Hose Clamp #72	AG1009-00
G	1	Side Inlet Seal	Al1611-00
Н	1	Retaining Bolt S.S. Allen Head M8	Al1369-00
1	1	Air Box	AL1218B-00
J	1	Front Inlet Seal	Al1610-00
K	4	Spacer	Al1621-00
L	1	Factory Swing Gate Motor	
М	4	Screw #10-24 x 1.75"	Al1619-00
N	1	Swing Gate Dam	Al1623-00
0	4	Flat Washer #10	Al1226-00
Р	2	Screw S.S. #10-24 x 3/4"	Al1624-00
Q	1	Tube Seal	Al1614-00
R	2	Locknut 10-24	Al1047-00

ITEM	QTY.	DESCRIPTION	P/N
S	1	Swing Gate Arm	Al1622-00
Т	1	Hose 1"ID x 8"	Al1724-01
U	3	S.S. Pan Head Screw 8-32 x 1/2"	Al1479-00
V	1	Gasket MAF	Al1301-00
W	1	Temp Gasket	Al1302-00
Х	1	Intake Tube	AL1218-00
Υ	2	Hose Clamp #16	AG1001-00
Z	1	Silicone Adapter, 4.10"IDx2.00"	Al1029C-00
AA	2	Hose Clamp #64	AG1018-00
BB	4	Sealing Washer #10 S.S	Al1273-00
CC	1	Hose 3/4"ID x 2"	Al1576-02
		PARTS BELOW ARE NOT IN VIEW	
AB	1	Hex Allen Key 1/8"	Al1634-00
AC	1	Insulation Sleeve 6.0"	Al1625-01
AD	1	Monitor Light 4M Red/Blk Wire	Al1627-00
AE	2	3M Quick Splice	Al1628-00
AF	5	Zip Ties	Al1212-00
AG	1	Extension Harness	Al1721-00

### **Warranty**

Visit <u>www.sbfilters.com</u> for complete warranty information.