

Approx. Install Time 3Hrs 00Min

Installation Instructions

Vehicle Application

Year: 2013 - 2014

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 Maintnance
Cleanable (KF-1037). If the enclosed filter is Red, it came pre-oiled from the factory. Please visit www.sbfilters.com 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.



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



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 factory swing gate motor connector 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 swing gate motor is disconnected completely remove the factory air box and intake tube by lifting up and out.



SEE EXPLODED VIEW ON PAGE 7



10. Once the factory air box and intake tube are removed the swing gate motor harness must be modified for the harness to reach the S&B air box.



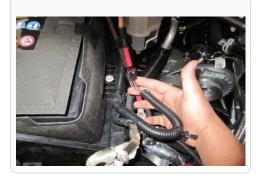
11. First remove the harness push pins that hold the harness down to the battery tray using a pry tool or flat head screw driver.



12. Remove the push pins on the harness that are located on the side and back of the battery tray.



13. Once the push pins are pulled out the harness can be pulled out further.



14. Pull the harness until it is stopped by these wires hooked up to the relay component.



15. Disconnect the wires from the relay component by pulling them off. Please take note on which wire was connected to which terminal because these wires will be reconnected after modification. Please mark each wire or take a photo to help remember the wire connections.



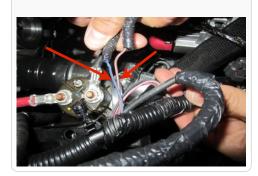
16. Cut into the base of the insulation on each line being careful not the cut or damage the wires inside.



17. Once the insulation is cut at the base of each line carefully cut into the main harness and again be careful not to cut or damage the wires inside.



18. Once the insulation is cut pull a length of about 3 inches for each line.



19. Use the provided insulated sleeve (AC) to insulate both wires together. The insulated sleeve gives the wires added protection.



20. Install the insulated sleeve (AC) over both wires, this extra length will let the harness extend and reach the S&B air box. Re-apply electrical tape to any exposed wires and sleeve to avoid corrosion.



21. Once both lines are insulated with the provided insulation sleeve reconnect each wire to the correct terminal on the relay component.





Installation Instructions (continued) (Optional Step)

22. 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



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 diverter 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 tap connectors (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. Diverter 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 7



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



24. Place MAF sensor and IAT Sensor onto the S&B intake tube (X) using the 8-32 pan head screws (U) and gaskets (V&W).



25. Remove the diverter intake motor (L) from the side of the factory air box using a T-27 torx key.



26. 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.



27. Mount the diverter motor onto the bottom of the S&B intake air box (I) using spacers (K) and screws (M) and washers (BB).



28. 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.



29. When placing the swing gate arm (S) onto 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.



30. 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 Dam (N) is desired, remove with Arm (S) installed on motor (L).



Warning: Never operate the vehicle with the Swing Gate Arm (S) removed or a Active Air Box Error will result & require the motor to be sent to S&B to be reset. The Dam (N) can be removed during good weather conditions. See #28 above.

31. Install the provided inlets (G&J) and tube seal (Q) into the S&B air box (I) by inserting and snapping into place.





32. Install the hose (T) with (Y) hose clamps. Next install coupler (Z) and hose clamps (AA) onto the S&B intake tube (X). Remember to only tighten hose clamps (Y) and (AA) on the tube side.



33. Install S&B intake tube (X) into S&B air box (I) by sliding the tube through the tube seal (Q). This should be a snug fit. A perfect seal is not required.



SEE EXPLODED VIEW ON PAGE 7



34. Place the S&B air box with air tube assembly into vehicle.

Read step 35 before continuing with #34



35. Before installing the air box and tube assembly attach the diverter harness connector to the diverter motor (L) that is located underneath the S&B air box.



36.(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.



36.(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.



37. 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.



38. Push down on air box and tighten the provided retaining bolt (H).



39. Connect hose (T) and tighten hose clamp (Y).



40. Connect coupler (Z) to turbo and tighten hose clamp (AA). Please make sure the coupler is push all the way onto turbo before tightening completely.



 $41. \ \mbox{Reconnect the MAF}$ and IAT sensor.



42. Install the filter (E), please make sure to install with flat side up and feed the filter onto tube and push down. Once installed tighten



43. Install the provided edge trim (C) around lid (D)



44. Once edge trim is installed roll the sides of the lid on a flat surface to ensure a tight seal.



SEE EXPLODED VIEW ON PAGE 7



45. Install the lid (C) using the provided 1/4" hardware (A&B).



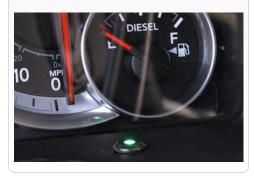
46. Reconnect both batteries



47. The Installation is now complete.



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



<u>Precision II</u> <u>Filter Cleaning & Oiling</u>



Order online today at www.sbfilters.com or through your local S&B distributor. Part #: 88-0008

RELATED ITEMS FOR YOUR PURCHASE

- 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)

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.



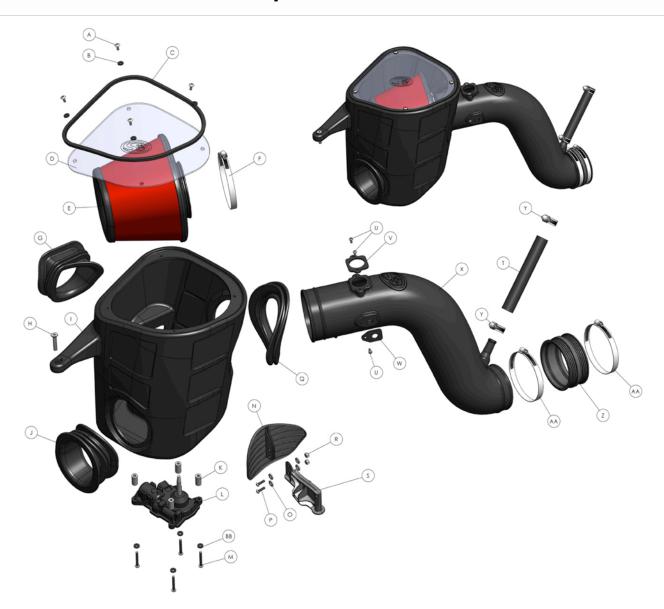
Emissions Standard

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 www.sbfilters.com. 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 7



Exploded View



ITEM	QTY.	DESCRIPTION	P/N
Α	4	S.S. Screw #10-24 x1/2"	AI1539-00
В	4	Sealing Washer #10	AI1540-00
С	1	Edge Trim	Al1620-01
D	1	Lid	Al1613-00
Е	1	S&B Air Filter	KF-1037
F	1	Filter Hose Clamp #72	AG1009-00
G	1	Side Inlet Seal	Al1610-00
Н	1	S.S. Allen Head M8	Al1369-00
I	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

ITEM	QTY.	DESCRIPTION	P/N	1
R	2	Locknut 10-24	Al1047-00	1
S	1	Swing Gate Arm	Al1622-00	L
Т	1	Hose 3/4" x 7"	Al1040-05	L
U	3	S.S. Pan Head Screw 8-32 x 1/2"	Al1479-00	L
V	1	Gasket MAF	Al1301-00	L
W	1	Temp Gasket	Al1302-00	L
Х	1	Intake Tube	AL1218-00	L
Υ	2	Hose Clamp #12	AG1030-00	L
Z	1	Silicone Adapter, 4.10"IDx2.00"	Al1029C-00	L
AA	2	Hose Clamp #64	AG1018-00	L
BB	4	Sealing Washer #10 S.S	Al1273-00	L
		PARTS BELOW ARE NOT IN VIEW		73
AB	1	Hex Allen Key 1/8"	Al1634-00	12/23
AC	1	Insulation Sleeve 6.0"	Al1625-01	S S
AD	1	Indicator Light 4M Red/Blk Wire	Al1627-00	AM0174-00 Rev.C 12/23/13
AE	2	3M Quick Splice	Al1628-00	174-(
AF	5	Zip Ties	Al1212-00	AMO

Warranty

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