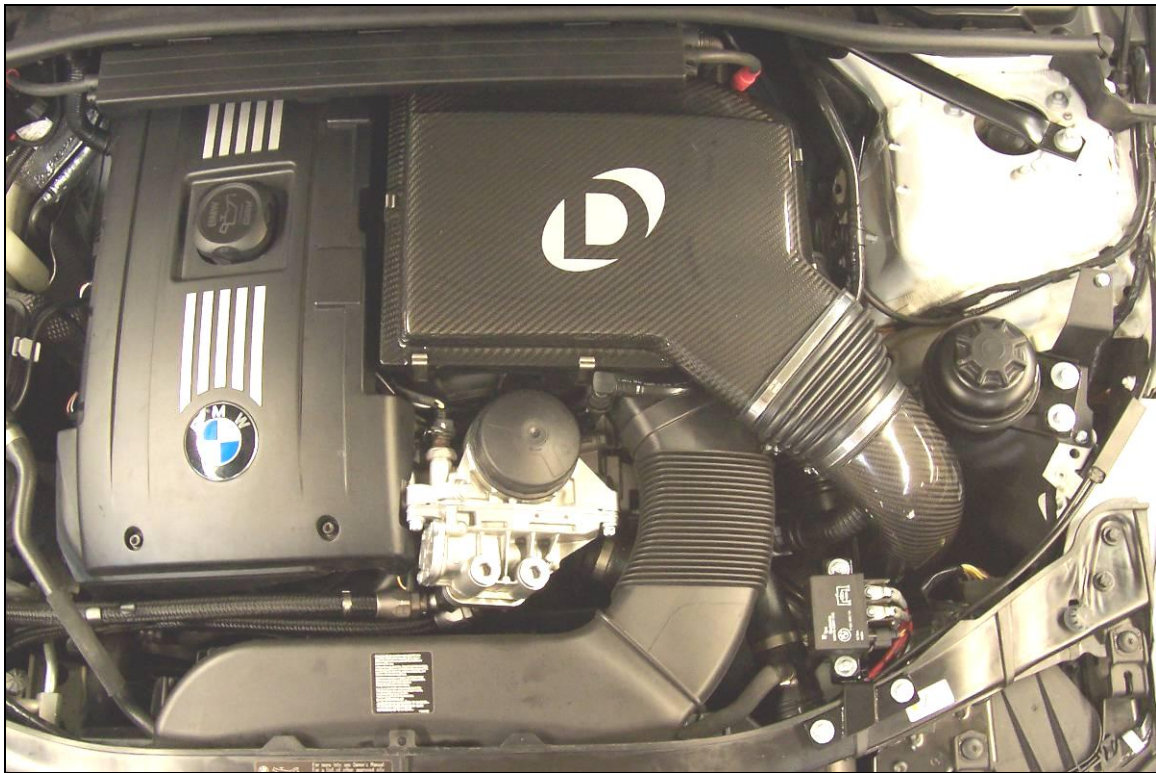




## COLD AIR INTAKE INSTALLATION INSTRUCTIONS

# D760-0031    Fits: 2011-13 335is (E92/E93 with N54 engine)



Congratulations for being selective enough to use a Dinan Engineering Cold Air Intake. We have spent many hours developing this system to assure that you will receive maximum performance and durability with minimum difficulty in installation.

Please take the time to read these instructions thoroughly before proceeding. When performing the installation, read the entire numbered instruction before working on the car. If you feel that you do not have the requisite skill, please arrange for a qualified repair facility to perform the installation.

If you encounter any difficulties during the installation, or if these instructions are not clear to you, please call Dinan's Technical Support Staff at (408) 779-8584.

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## PARTS LIST

Qty	Part #	Description
1	D401-0016	Round Air Filter with clamp
1	D762-0107	Power Steering Bracket
1	D762-0115	Carbon Intake Tube
1	D762-0116	Airbox Hose
1	D762-0117	Carbon Airbox Lid
1	D762-0120	Filter Bracket
1	D762-0121	Filter Shield
1	D762-0129	Fan Relay Bracket
1	D763-0080	Heatshield with edge-trim
1	KN33-2367	Panel Air Filter
1	64 21 6 983 858	Heater Hose
1	17 12 7 564 480	Lower Radiator Hose
1	51 71 8 047 459	Left Front Wheel Well Liner
1	D763-0059	Hardware Kit; includes: <ul style="list-style-type: none"><li>(1) D763-0079, Horn Wire Sleeve</li><li>(1) D671-0108, Spacer</li><li>(1) D671-0088, Small Grommet</li><li>(3) D671-0096, Plastic Rivets</li><li>(1) #64Z (90-110), Hose Clamp</li><li>(1) #48Z (80-100), Hose Clamp</li><li>(5) M6X16 Hex Head Bolts</li><li>(2) M6X35 Bolts</li><li>(1) M6X25 Bolt</li><li>(5) M6X16 Button-head Stainless Bolts</li><li>(14) M6X18 FENDER Washers</li><li>(2) M6X25 FENDER Washers</li><li>(3) M6 FLAT Washers</li><li>(9) M6 NYLOK Nuts</li><li>(5) M6 WAVE Washers</li></ul>

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### **NOTES:**

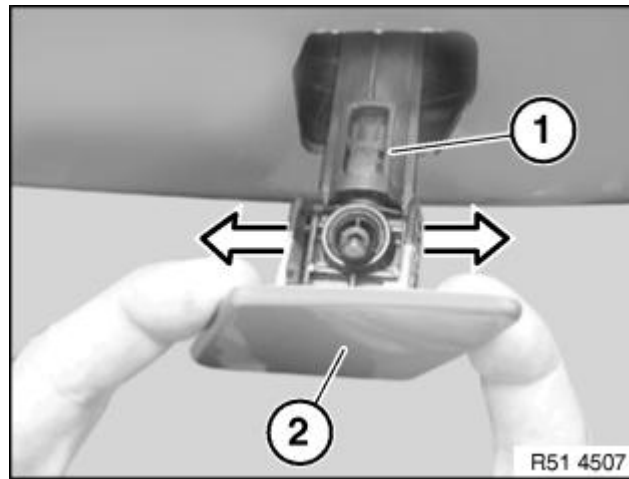
**This Dinan Cold Air Intake system deletes the small auxiliary radiator that was installed only on the later model 135's and 335's. BMW located the auxiliary radiator where our Cold Air Intake filter normally mounts, as this was the last unused area with sufficient space and airflow. To make an effective Cold Air Intake system and achieve a real horsepower gain, this optimal space must be utilized. To offset the removal of the auxiliary radiator, this Cold Air Intake may only be installed on cars equipped with the much larger Dinan Oil Cooler. Since normal oil temperature is significantly hotter than the normal water temperature, the Dinan Oil Cooler has greater ability to remove excess heat from the engine, given comparable ambient air temperatures and air speed. This is due to the greater temperature differential between the heat exchanger and the cooler ambient air passing through the core.**

# INSTALLATION INSTRUCTIONS

## Remove Front Bumper Skin

**All reference to left and right side of vehicle is as if you were sitting in the car looking forward: Left = drivers side; Right = passenger's side.**

1. Disconnect the negative battery cable from the battery.
2. Remove the doors for the headlight cleaning system if your car is equipped with them. Pull out spray nozzle (1) by cover (2). Hold spray nozzle and carefully unclip cover sideways and remove. **Important! Do not let go of Spray Nozzle when removing Cover!** Grip spray nozzle firmly. See figure below. Your car may have a different looking cover with metal springs.



3. Remove the front wheels.
4. Remove the screws that secure the painted bumper skin to the large front lower splash shield and wheel well liners at the front edge. When reinstalling these screws, use hand tools only to prevent stripping the threads.
5. Remove the large plastic lower tray from under the engine.
6. Remove the forward section of both front wheel well liners.
7. Remove the two screws (per side) that connect the top edge of the bumper skin to the front of the fenders. These screw heads point down. Notice that these screws have special threads just for plastic and must be reused in the original holes. These screws must not be over tightened!
8. Disconnect the fog light plugs and harnesses from the bumper skin.
9. Remove the four Torx head screws that secure the top of the bumper skin to the radiator support frame (front panel).
10. Prepare a stand or cart for storing the delicate bumper skin.
11. Remove and safely store the bumper skin.

## **Remove the Coolant Hoses and Aux Radiator**

12. You will need to remove the lower radiator hose and the lower heater hose which both connect to the auxiliary radiator. You should start by removing the coolant reservoir cap and place a rag over the opening. Then raise the car and place a drain barrel under the front of the engine. Disconnect the lower radiator hose from the thermostat housing and let it drain for a while. You can use two long screwdrivers to pop the latch clip up.
13. Lower the car and remove the large air duct that goes from above the radiator to the air box by removing the four screws that go through the two front duct inlets. Cover opening in the airbox with rag.
14. Look to see if the car is equipped with the two diagonally mounted tubular braces that connect to the front center of the front subframe, then up to the top of the frame rail, then up to the front fender support. These are found on all of the convertibles and some two-door cars. You need to unbolt these and get the right side brace up and forward just a little to help gain space to remove the lower radiator hose. Remove the two bolts and one nut if so equipped.
15. Next you will need to remove the lower heater hose, which is the one that is lowest at the firewall. Closely observe how the hose is routed in relation to the other hoses around it so you can remember whether it goes under or over the other hoses. Use a pocket screwdriver or similar tool to pull the latch clip downward where the hose meets the firewall. You will not be able to see the clip but it is easy to feel with your fingertips. Unclip the heater hose at the upper radiator hose. Carefully remove the hose while also removing the plastic mounting clamp at the top of the frame rail. You will be reusing the plastic mounting clamp so save it.
16. You will install the new heater hose after you remove the stock power steering reservoir bracket.
17. Now the fun part! You need to remove the lower radiator hose. Notice whether the lower radiator hose routes under or over the AC line just above the intercooler inlet tube. It probably routes over the AC line. To get to the hose you may want to disconnect the oil cooler lines at the oil filter thermostat housing located at the top front center of the engine, and remove the large plastic cover that is on the valve cover. If you are very nimble you can probably get it out without removing these. Removing these items out of the way first makes it easier and avoids injury to the new hose. Have a few rags ready if you are removing the oil lines. If you are also installing a Dinan Oil Cooler at the same time these oil lines need to come off anyway.
18. The small plastic crossover tube that comes from the lower radiator hose must be moved upward past the aluminum AC line, then up out from the space between the engine and the radiator. You may need a long pry-bar to gently push the AC line rearward to get the tube past it.
19. Once you have the hose disconnected at both ends you can move the lower hose end out of the plastic mounting clip then inward past the smaller hose to the larger space between the tubular brace and the engine. Now rotate the hose end clockwise so it is roughly pointing at the left side frame rail. The hose should now come out fairly easily.

20. Locate the **17 12 7 564 480 Lower Radiator Hose**. Apply a thin film of fresh coolant on the inside mating surfaces and O-rings of the new hose. Install this hose just how you removed the original hose making sure it is in the mounting clip before you attempt to push it on the thermostat fitting. It is easy to access the end of this hose from below. Be careful to properly position the hose ends before pushing them on. You will hear and feel a “snap” when they are engaged.
21. Remove the small auxiliary radiator.
22. Temporarily remove the left side horn.

### Relocate the Power Steering Reservoir

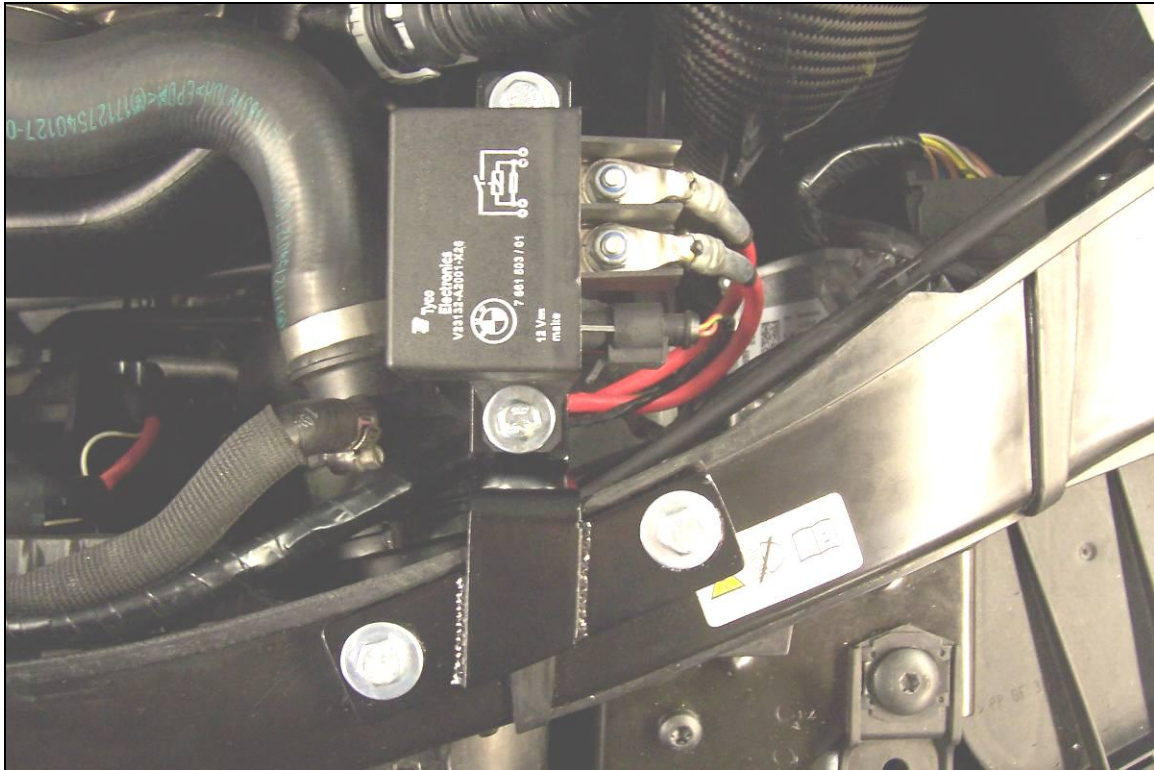
23. The long metal power steering reservoir bracket will need to be removed to create space for the new Carbon Intake Tube.
24. Check to see if the car has the large Aux fan relay. This relay mounts to a short bracket that is secured to the same two studs that the power steering reservoir is mounted on. Remove the relay from the short bracket and set it forward out of the way for now.
25. Remove the PS reservoir from the original bracket, saving the nuts and washers. The stock Aux fan relay bracket will not be reused. Later cars will have nuts with large washers connected to them. Remove the two metal insert bushings from the rubber bushings if they are not held tightly in place as they often fall out by themselves.
26. Remove the PS reservoir bracket. This part will not be reused.
27. Temporarily wire-tie the reservoir back and out of the way if you need to cut the diagonal brace (read the next step).
28. If there are diagonally mounted tubular braces then the upper section of the left side brace needs to be cut just to the outside of where it is mounted to the framerail. Some cars may have a brace that only goes from the top of the frame rail to the fender support. If this is the case you will only need to remove the brace. **See the following photo showing the shortened brace, and follow the next few steps if you must cut the brace.**



29. Unbolt the brace and carefully pull it up and outward as far as it will easily go.
30. **Wear gloves, particle mask and safety glasses when cutting with the fiberglass cutting disc!** Use a fiberglass cutting disc held in a 90° die-grinder to carefully cut the brace. You want to mask off the area around the brace to keep the chips out of any open hoses etc. It is best to make several shallow cuts as opposed to making one full depth pass. Discard the upper section after removal.
31. Deburr the cut edges of the brace to be left in the car.
32. Tear a small hole in the center of a sheet of paper then slide over the end of the cut and deburred end of brace to mask it for painting. Use some black spray paint or touch-up paint to cover the bare metal thoroughly.
33. When the painted tube has dried you can reinstall the remaining section of the brace. Reinstall the braces and the metal cover at the subframe if so equipped.
34. Reinstall the plastic heater hose mounting-clip that came off of the nut that secured the tubular brace if it came with one.
35. Locate the **D762-0107 Power Steering Bracket**, the **D671-0108 Spacer**, one M6x25 bolt, two M6x16 bolts and two M6 wave washers. See the photo at beginning of these instructions. Install the front M6x16 bolt with M6 wave washer finger tight first to see if the Spacer and longer mounting bolt will be needed at the rear hole of the Bracket. If there appears to be a gap at the rear hole of the Bracket or it does not sit fairly flat then you should use the Spacer and M6x25 bolt with M6 wave washer to secure the rear of this Bracket. If there is no gap and the Bracket sits fairly flat against the rear threaded hole then use the M6x16 bolt and M6 wave washer. Tighten both bolts.
36. Mount the reservoir to the Bracket using the supplied M6x35 bolts, and the original washers and lock nuts. Use the two M6x25 flat washers if the car did not come with separate washers. Make sure the stock metal spacer bushings are still in place in the two rubber grommets.
37. Now you can install the **64 21 6 983 858 Heater Hose** using the exact same routing as the original heater hose. Be sure to secure the new hose at the small screw-stud on the frame rail using the original hose mounting clamp.
38. Reinsert the heater hose into the plastic heater hose mounting-clip on the nut that secures the tubular brace if it came with one.

## Install the Fan Relay Bracket

39. Locate the **D762-0129 Fan Relay Bracket**, two M6x16 hex head bolts, two M6x16 flat washers and two M6 nylok nuts. Use the hardware to attach the fan relay to the Bracket as shown with the washers on the topside of the plastic surface. Do not over tighten the nuts.
40. Set the relay/Bracket assy on the top edge of the front panel as shown to find the location that allows **sufficient space below for the nuts and washers**. Hold the Bracket firmly down on the front panel surface against the lip and mark the two holes with a sharp scribe.

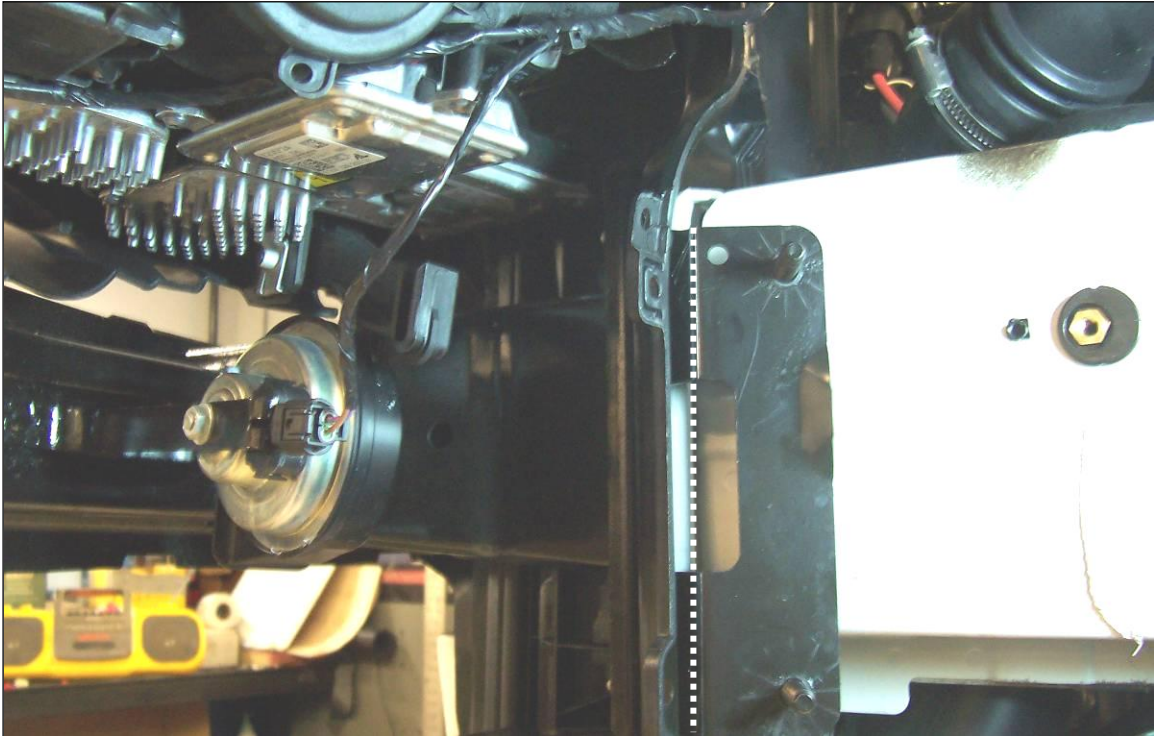


41. Use a very sharp center-punch and light weight hammer to mark the centers of the two holes to be drilled. This part of the front panel should be metal.
42. **Place a block of wood or metal under the panel when you drill the mounting holes.** Drill both "pilot-holes" with a small bit (1/8" or smaller).
43. Drill out the holes to 9/32".
44. The key to drilling in sheet metal is to run the bit fairly fast with minimal downward pressure and one hand pulling upward so when the bit starts to go through you can counteract the tendency of the bit to dig-in and pull its way downward quickly. Let off the "throttle" immediately if the bit starts to load up and dig-in. An even better choice would be to use a Uni-bit which has several steps which gain a diameter size with each step.
45. Deburr the two holes.
46. Mount the Fan Relay Bracket assy onto the front panel using the two M6x16 hex head bolts, four M6x16 flat washers and two M6 nylok nuts.

47. Double check the position and routing of the relay wires and secure them to the hood latch cable if desired.

### **Remove the Auxiliary Radiator Mounting Bracket**

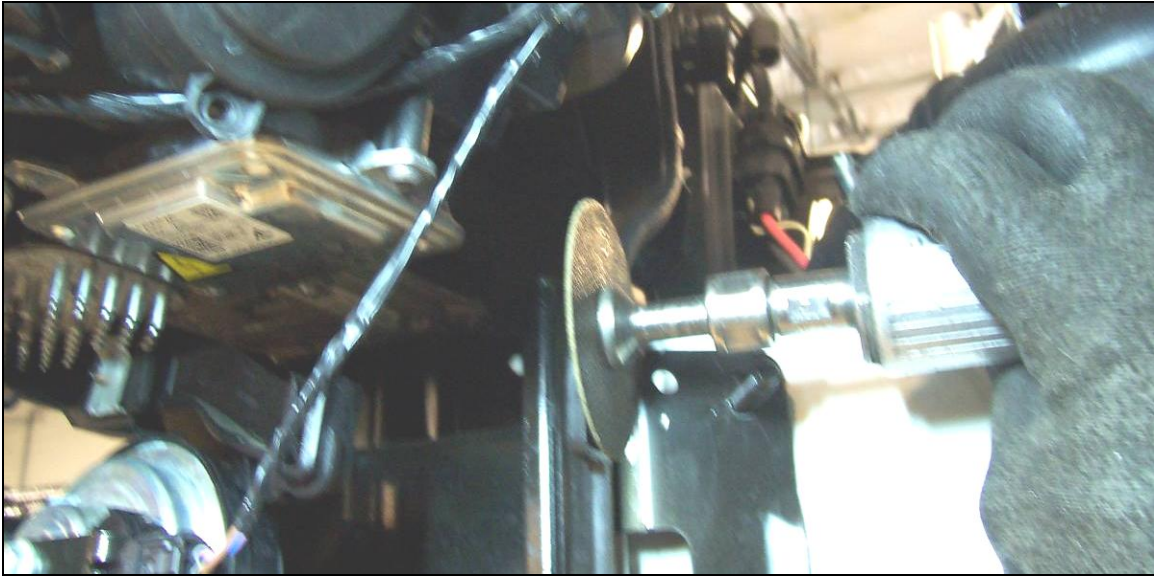
48. You will need to cut off the metal bracket that once secured the Aux radiator with two welded studs. This will make space for the Carbon Fiber Tube. See photo.



49. Unplug the plastic holder for the small wire loom that is just above the metal bracket and wire-tie it up far out of the way of the “cut-zone” (see dotted line above).
50. Now you will need to unbolt and move the left headlight assy forward and away from the cut-zone to prevent any damage to the headlight assy. Firmly pull outward on the rear end of the small plastic headlight support bracket to unclip it from the plastic tab it is attached to. I would suggest not disconnecting the headlight wires.
51. Remove the upper-outer torx head screw. This screw head faces over the top of where the front left tire normally is.
52. Remove the two Torx head screws that attach the headlight assy to the large plastic coated “front panel” (aka: radiator support frame). DO NOT remove the two torx head screws that secure the hood latch bracket.
53. Remove the two torx head screws that are inward of the front of the headlight assy and slightly behind the large soft radiator inlet duct.
54. Carefully pull the headlight assy forward and rotate it so there is no chance that you can slip with the fiberglass cutting disc and damage the headlight assy. You may want to use some tape to secure it for now. Use some tape if needed to protect the paint at the front of fender.



55. Use a fiberglass cutting disc held in a die-grinder to cut the Aux radiator mounting Bkt next to the bend (on the forward side of the bend) as shown in photo. You can scribe a line first if desired. Make one good cutting pass to mark the line well then several passes until you are done.



56. Deburr the cut edges with a sanding disc or file.
57. Mask off the remaining portion around the cut bracket as shown then spray with at least two coats of black paint.
58. Carefully remove the tape.



59. Reinstall the headlight assy by first starting all of the screws then tightening them with the assy positioned just like it was.

60. Reinstall the small wire loom to the hole in the front panel.
61. By now both tubular braces should both be reinstalled, and the cover that covered the lower intersection of the braces should be reinstalled if it had one.

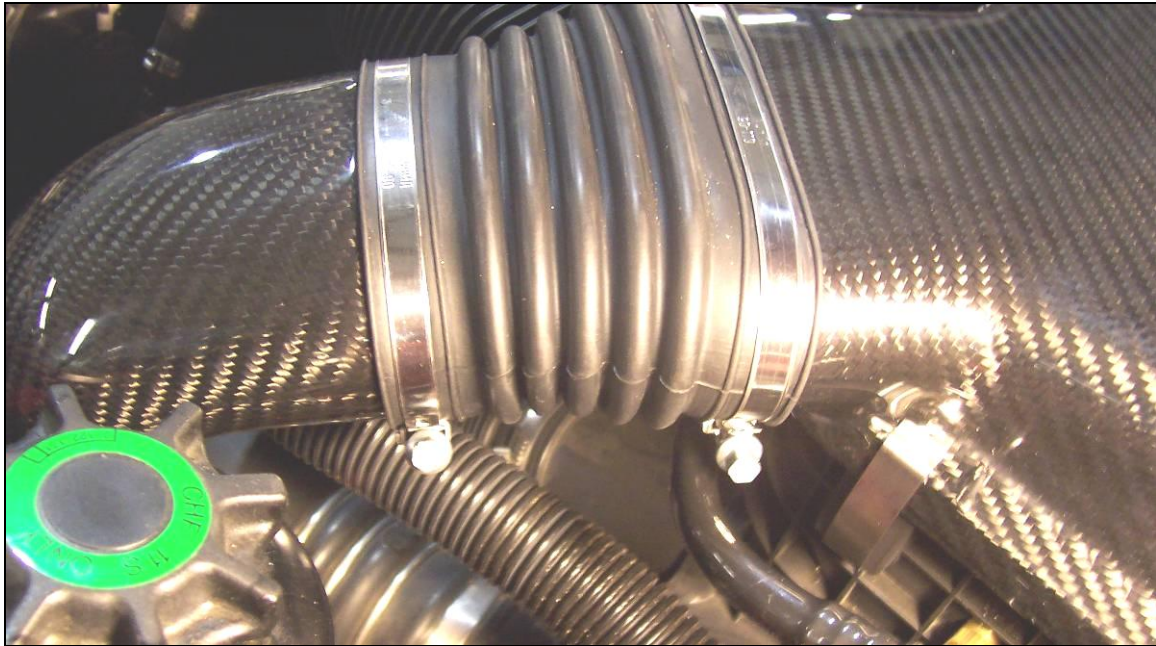
### Install the Wheel Well Liner

62. Locate the **51 71 8 047 459 Left Front Wheel Well Liner**. It should look just like the stock liner but does not have the cut-out for the Aux radiator.
63. The goal now is to position the Wheel Well Liner exactly as it will be when the car is completely together. The new Air Filter and Filter Shield will mount directly to the Wheel Well liner. Temporarily reinstall the bumper skin using just the outer two top big-head torx screws and the rearward special plastic screws that secure the bumper skin to the front fenders.
64. Reinstall the large plastic lower engine tray.
65. Now install the new Wheel Well liner. First start all of the screws a couple of turns then tighten the three screws where the front liner meets the rear liner. Next tighten the one plastic nut. Tighten the screws where the Liner meets the lower tray.
66. Remove the bumper skin. You may want to temporarily remove just the outer screw where the front liner meets the rear liner so you can pull the edge of the liner out a bit to remove the screw that should be in place to secure the bumper skin to the front fender. Replace the liner screw you removed after you remove the bumper skin.

### Install Airbox Lid and Intake Tube

67. Remove the stock airbox lid.
68. Install the KN33-2367 Air Filter. Make sure that the filter stays securely in place when installing the airbox top. If for some reason the loose piece of rubber seal was to get damaged and fall into the airbox it could severely damage the turbo(s).
69. Locate the **D762-0117 Airbox Lid**. This lid mounts the same as the stock lid but requires a little finesse to install. Insert the three Airbox Lid tabs into the airbox slots. Push the front of the Lid downward and rearward while wiggling a little side to side. Now concentrate your effort on getting the front right (closest to valve cover) corner of the Lid to fit slightly over the top edge of airbox. This will take some downward pressure and a little side-to-side motion. As soon as the corner is correctly positioned engage the mounting clip at the front corner. Next engage the clip next to the valve cover then the remaining clips. If you have trouble with this sequence try engaging the two clips closest to the left front fender first.

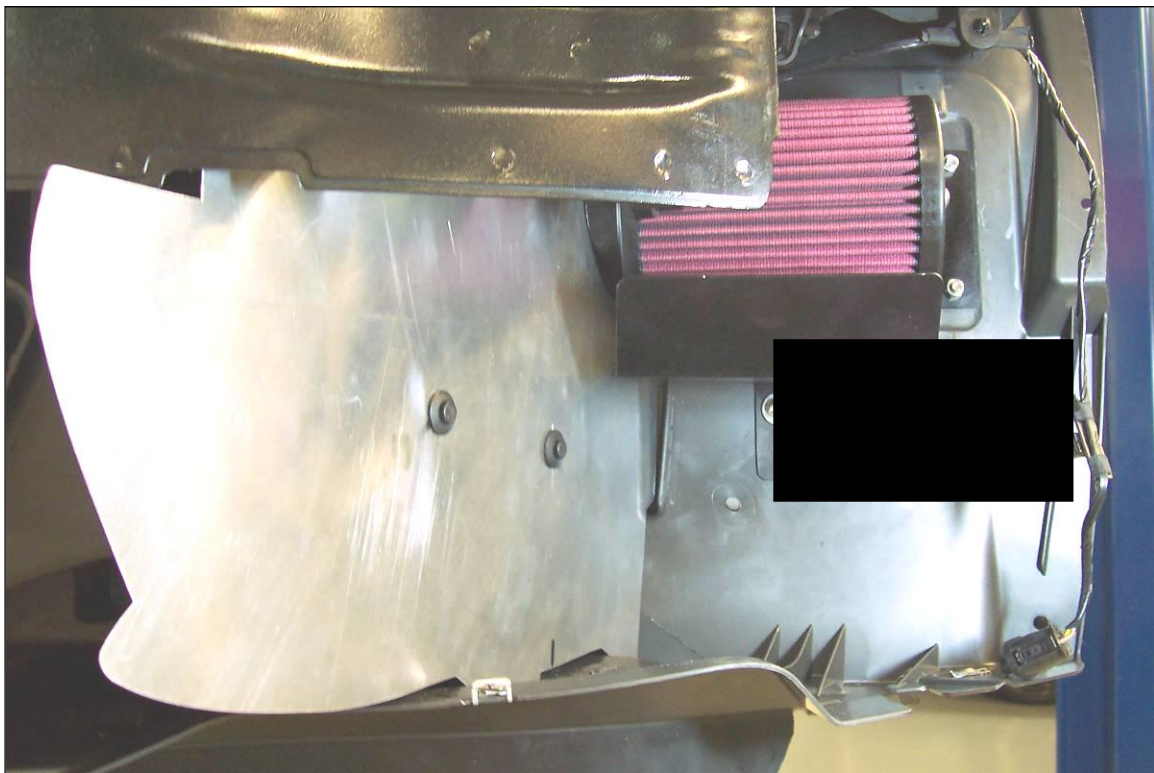
70. Locate the **D762-0116 Airbox Hose** and one **#64Z (90-110) Hose Clamp**. Fit the clamp onto the Hose as shown below. You will need to gently bend the hose clamp into an oval before installation. Tucking the screw head under the side of the Hose makes for a nicer look. Place the clamp in position on the Hose and slide the assembly over the lip on the Airbox Lid inlet. Make sure the hose clamp is evenly situated behind the lip all the way around, then tighten the clamp. Notice that the Hose curves downward. You may notice that this hose clamp is a tad on the short side. Unfortunately the next size clamp is way too long and leaves a “tail” that is well over an inch long.



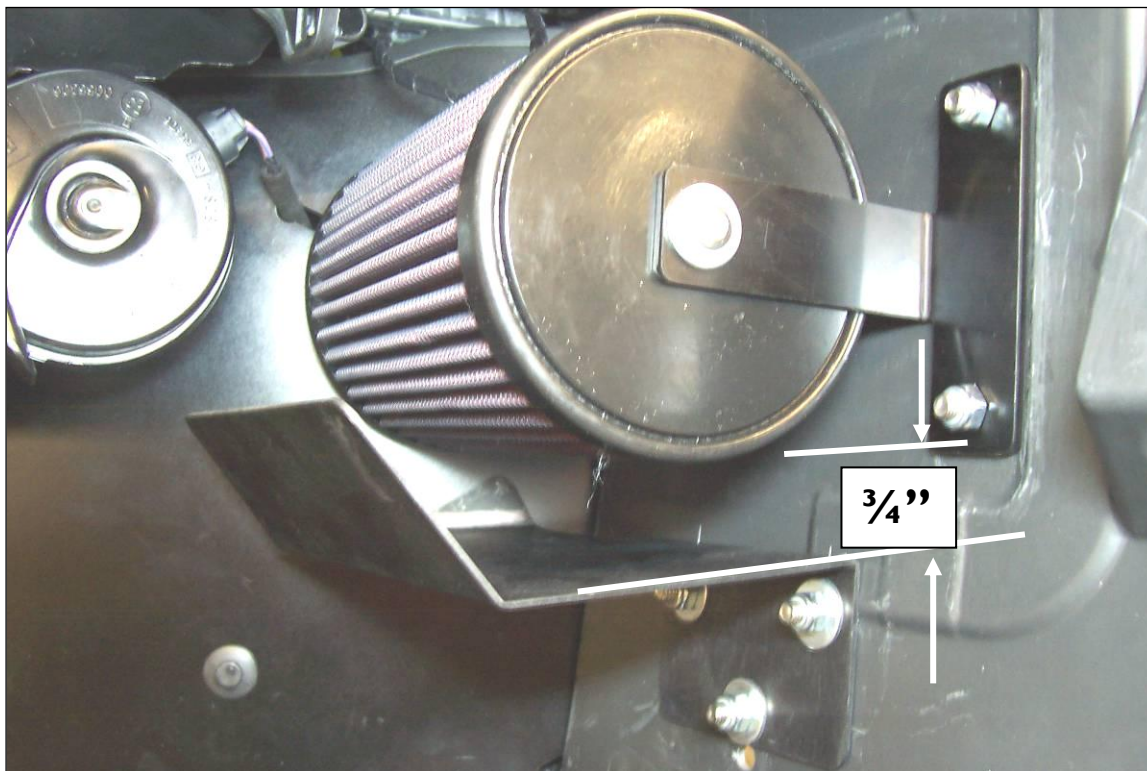
71. Locate the **D762-0115 Carbon Intake Tube** and one **#48Z (80-100) Hose Clamp**. Fit the clamp onto the Airbox Hose as shown previously and install the Tube down into the space below the headlights and into the Hose. Tighten the hose clamp with the Intake Tube rotated so it has the most “wiggle room” at its lower end.
72. Locate the **D401-0016 Air Filter with Clamp**. Install the Filter onto the Intake Tube with the clamp screw below the Tube and facing forward. Rotate the Air Filter so it is parallel with the wheel well liner face and level when viewed from the front. Tighten clamp.

### Install the Heat Shield and Air Filter

73. Locate the **D763-0080 Heat Shield**, **D763-007 Horn Wire Sleeve** and two **D671-0096, Plastic Rivets**. The Heat Shield will mount to the brake duct. See photo for position.
74. Carefully insert the Heat Shield between the end of the Air Filter and the brake duct while holding the horn wires up next to the Air Filter flange. The horn wire will go through the slot in the Heat Shield and get installed in the hole at the end of the slot using the small Sleeve. This may take a little twisting of the Shield. Hold the Heat Shield against the brake duct, snug along the wheel well liner and down against the lower surface of the liner so it fits well into the detail of the liner. Gently lift up the forward-most edge of the wheel well liner, as it would be when the bumper skin is installed. Now use a 1/4" drill bit to drill the rear mounting hole through the brake duct while carefully holding the Heat Shield in proper position.
75. Install one of the plastic rivets through the Shield hole and into the hole you drilled in the brake duct. Repeat the process for the forward hole.

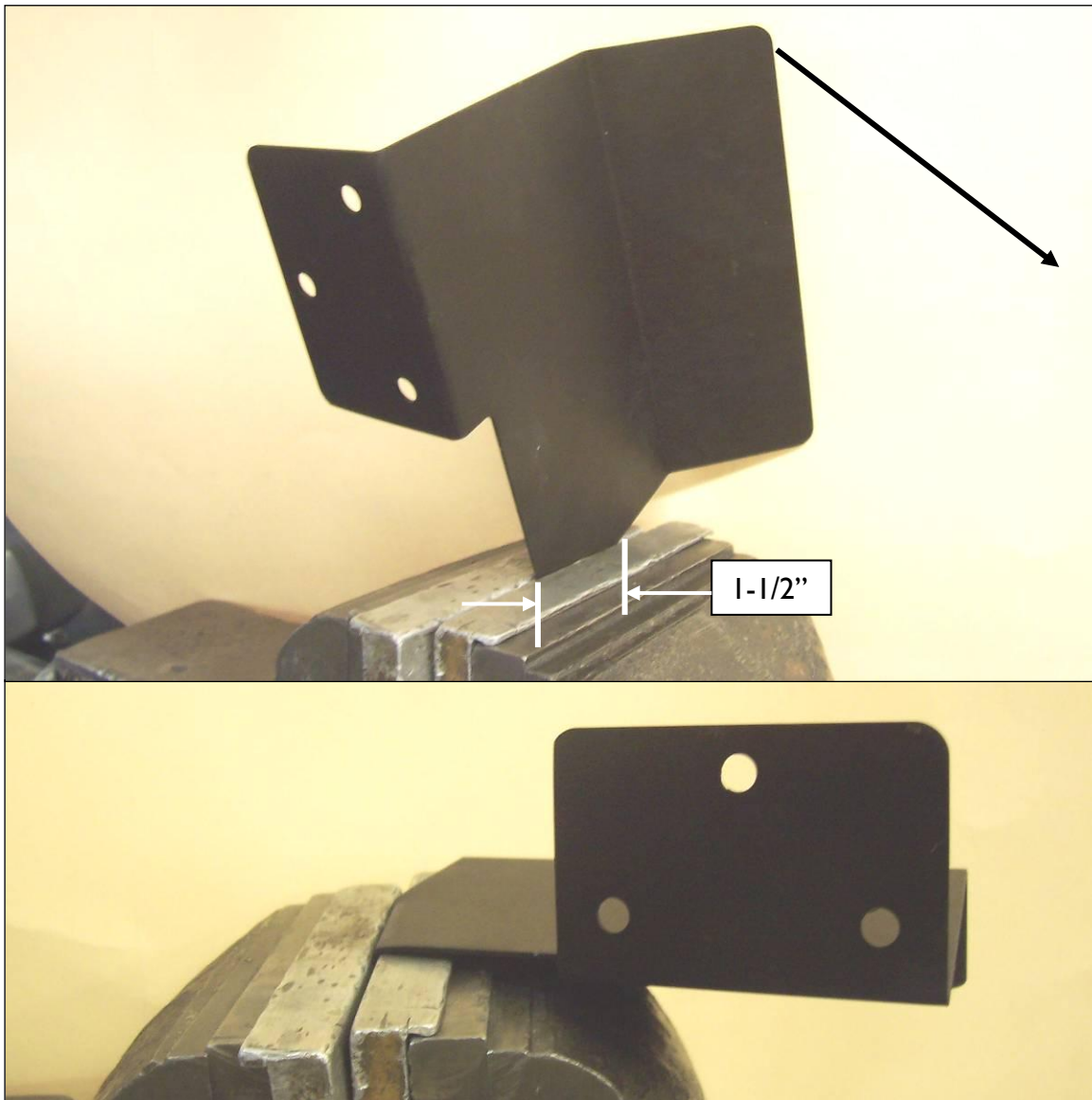


76. Locate the **D762-0120 Filter Bracket**, three M6x16 button-head bolts, five M6x18 flat washers, two M6 nylok nuts and one M6 wave washer. Loosely mount the bracket to the end of the Air Filter using one M6x16 bolt, one M6 wave washer and one M6x18 flat washer. The base of the bracket will face towards the outer edge of the wheel well liner as shown below. Hold the Air Filter/Bracket Assy so the Filter is level and the bracket base is flat against the wheel well liner. Scribe the two mounting holes onto the wheel well liner while holding the assembly in the correct position.



77. Use your sharp scribe to “center-mark” the two hole centers. Push the scribe hard into the center of each hole with a circular motion to leave a good “pilot mark”.
78. Use a small drill bit (1/8” or smaller) to drill the two pilot holes in brake duct.
79. Drill the holes out to 9/32”.
80. Deburr the holes if needed using a much larger sharp drill bit, turning the bit **by hand** a couple of turns.
81. Center-mark and drill the holes (9/32”) as done previously.
82. Mount the Filter Bracket to the wheel well liner using the remaining above hardware. Insert the two button-head bolts from the rear side of the wheel well liner.
83. Tighten the single bolt at the Filter.
84. Locate the **D762-0121 Filter Shield**, three M6x16 button-head bolts, six M6x18 flat washers and three M6 nylok nuts. This Shield prevents water from directly hitting the Air Filter. See previous photo for position of the Filter Shield.

85. For the Shield to fit properly on this car you need to make a minor bend in the Filter Shield as shown below. This bend is not critical in its dimensions. You can use a felt pen to mark a line or simply place the corner into a vise with “soft-jaw” inserts about **3/4” deep** and tilted so the width of the bend is about 1-1/2” as shown. Use your hands to bend the Shield down roughly 90°.



86. Hold the base of the Shield against the wheel well liner level with the filter and about 3/4" from the Filter at the closest point (the Shield in the photo actually is a little too low so note that it should mount a little higher than in the photo). If the Shield is mounted too low it will hit the foglight assy when you reinstall the bumper skin. The Shield should be centered with the Filter element when viewed from the front. Mark the three mounting holes in this position.
87. Center-mark and drill the holes (9/32") as done previously.
88. Mount the Filter Shield using the above hardware. Again insert the button-head bolts from the rear of the wheel well liner.

89. Slip the Horn Wire Sleeve over the horn wires then insert into the hole at the end of the small slot. Push the sleeve half-way through the hole. Check to make sure that no wires are in danger of getting pinched or rubbing on any sharp corners.
90. Reinstall the horn and connect the wire connector.
91. Refill the cooling system with the appropriate coolant and pressure test the system. Be sure to bleed the purge line when you start the engine and add coolant as necessary. Use BMW's recommendation for coolant to water ratio. Remember that too much coolant and not enough water will reduce the cooling efficiency of the radiator.
92. Reinstall the front bumper skin being very careful to position the Oil Cooler Duct edges above and below the grill opening. If for some reason the Duct opening does not seem large enough to go over the grill opening you may need to bend the upper section of the duct up until there is sufficient space.
93. Reinstall the right side wheel well liner if you haven't already done so.
94. Reinstall the large air intake duct above the radiator.
95. Reinstall and torque the front wheels.

Happy Motoring!