



DINAN

Cold Air Intake INSTALLATION INSTRUCTIONS

D760-0034 Fits: 2011 1-M Coupe (E82 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.

PARTS LIST

<u>Qty</u>	<u>Part #</u>	<u>Description</u>
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	D762-0173	Filter Bracket
1	D762-0174	Rain Deflector
1	D762-0172	Vent Cover
1	D762-0165	Bracket
1	D762-0166	Upper Heat Shield
1	D762-0167	Lower Heat Shield
1	KN33-2367	Panel Air Filter
1	64 21 6 983 858	Heater Hose
1	17 12 7 564 480	Lower Radiator Hose
1	D763-0083	Hardware Kit; includes:
	1	D763-0084 10" Edge Trim
	1	D393-0026 4" Horn Wire Sleeve
	1	D671-0108 Spacer
	1	07 11 9 905 184 Coarse Thread Screw
	1	#64Z (90-110) Hose Clamp
	1	#48Z (80-100) Hose Clamp
	2	D393-0027 3/16" hose, 5/8" Long
	1	M6X25 M6 x 25mm Bolt
	5	M6X16 M6 x 16mm Bolt
	5	M6 WAVE M6 Wave Washer
	2	M6X35 M6 x 35mm Bolt
	2	M6 FLAT M6 Flat Washer
	7	M6 NYLOK M6 Nylok Nut
	9	D671-0378 M6 x 16mm Button Head Bolt
	16	M6X18 FENDER M6 x 18mm Washer
	2	M4X16 M4 x 16mm Bolt
	4	M4X12 FENDER M4 x 12mm Washer
	2	M4 NYLOK M4 Nylok Nut
	1	D763-0085 Small Edge Trim
	10	D671-0330 1/8" Rivets

NOTES:

This Dinan Cold Air Intake system deletes the small auxiliary radiator that was installed only on the later model 135's, 335's and 1-M'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

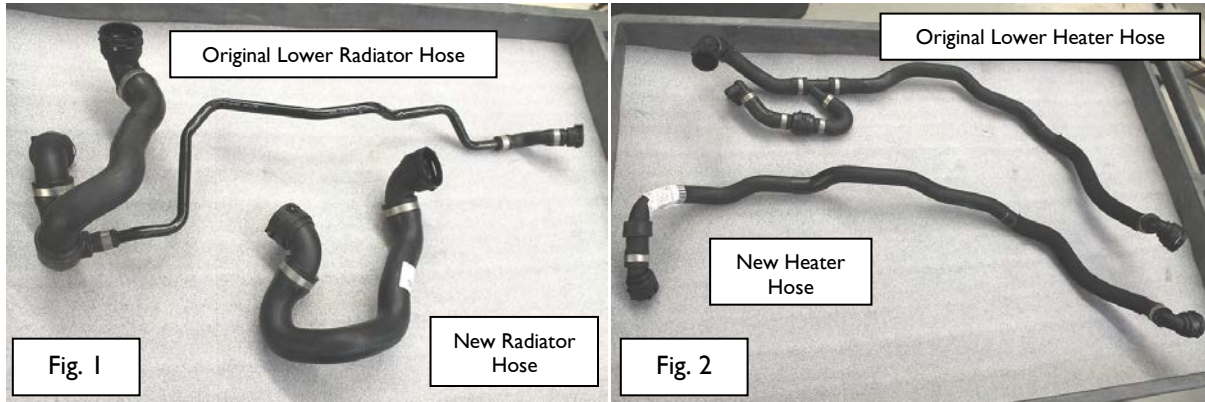
Remove Front Bumper Skin

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 left front wheel.
3. Remove the Front Bumper:
 - Remove the four torx bolts along the top of the bumper.
 - Remove the three 8mm head screws on each side where the bumper connects to the fender liners.
 - Remove the one silver colored screw on each side attaching the outer corners of the bumper to the fender.
 - Remove the nine 8mm head screws along the lower front edge of the bumper
4. Remove the forward section of the left front wheel well liner.
5. Prepare a stand or cart for storing the bumper skin.
6. Remove and safely store the bumper skin. Attn: You will need to lift up a little where the headlight squirter are as there are delicate hoses that hang over the top lip of the metal bumper.
7. 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 the opening in the airbox with a rag.

Remove the Lower Radiator Hose and Auxiliary Radiator

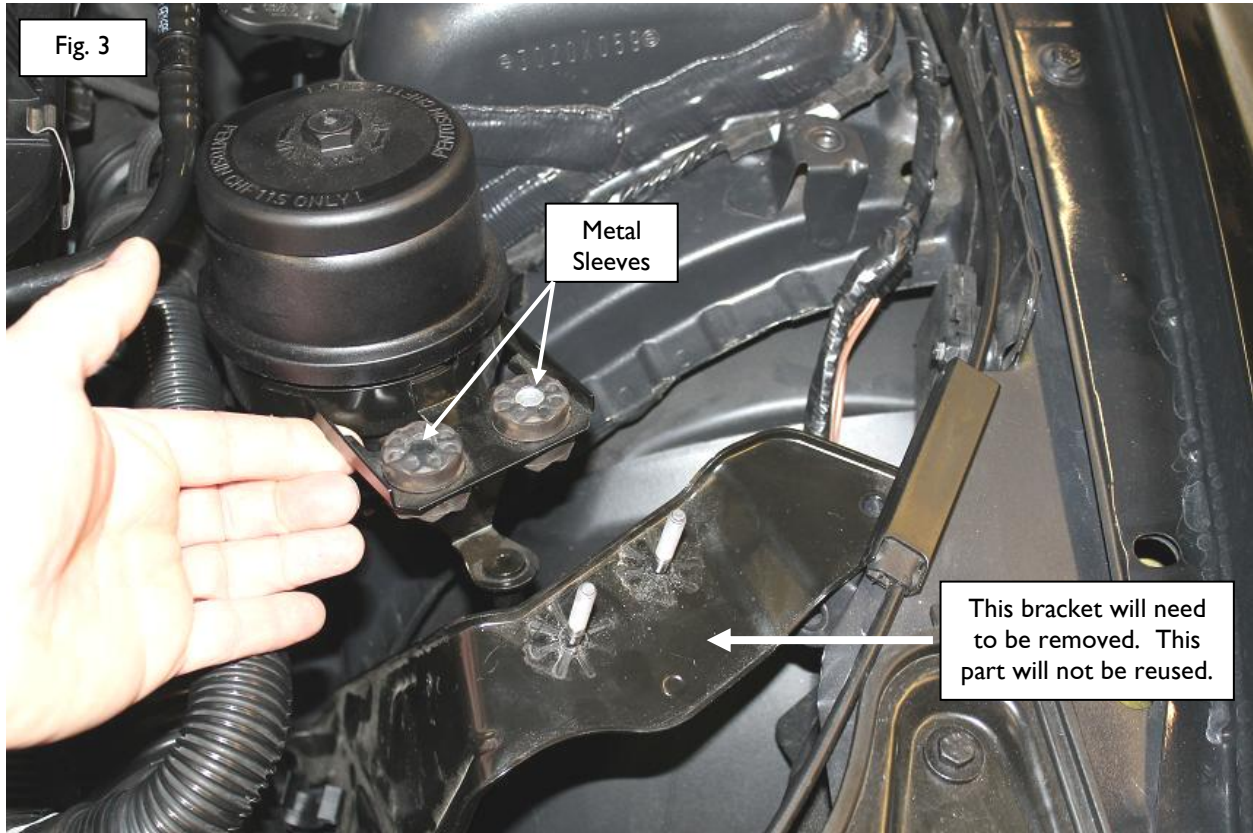
8. You will need to remove the lower radiator hose and the lower heater hose which both connect to the auxiliary radiator. These hoses will be replaced with parts that do not have connections for the auxiliary radiator. The lower radiator hose connects between the passenger side of the radiator and the thermostat. The lower heater hose connects between the upper radiator hose and the firewall. Replace the lower radiator hose with 17 12 7 564 480 and replace the lower heater hose with 64 21 6 983 858, which are both included in this kit. **Fig's 1 & 2** illustrate the difference in the original and replacement hoses. Refer to BMW TIS #17 11 000 for removing the Auxiliary Radiator. The Auxiliary Radiator will not be reused.



9. Remove the black plastic air duct from the auxiliary radiator and set aside for now.

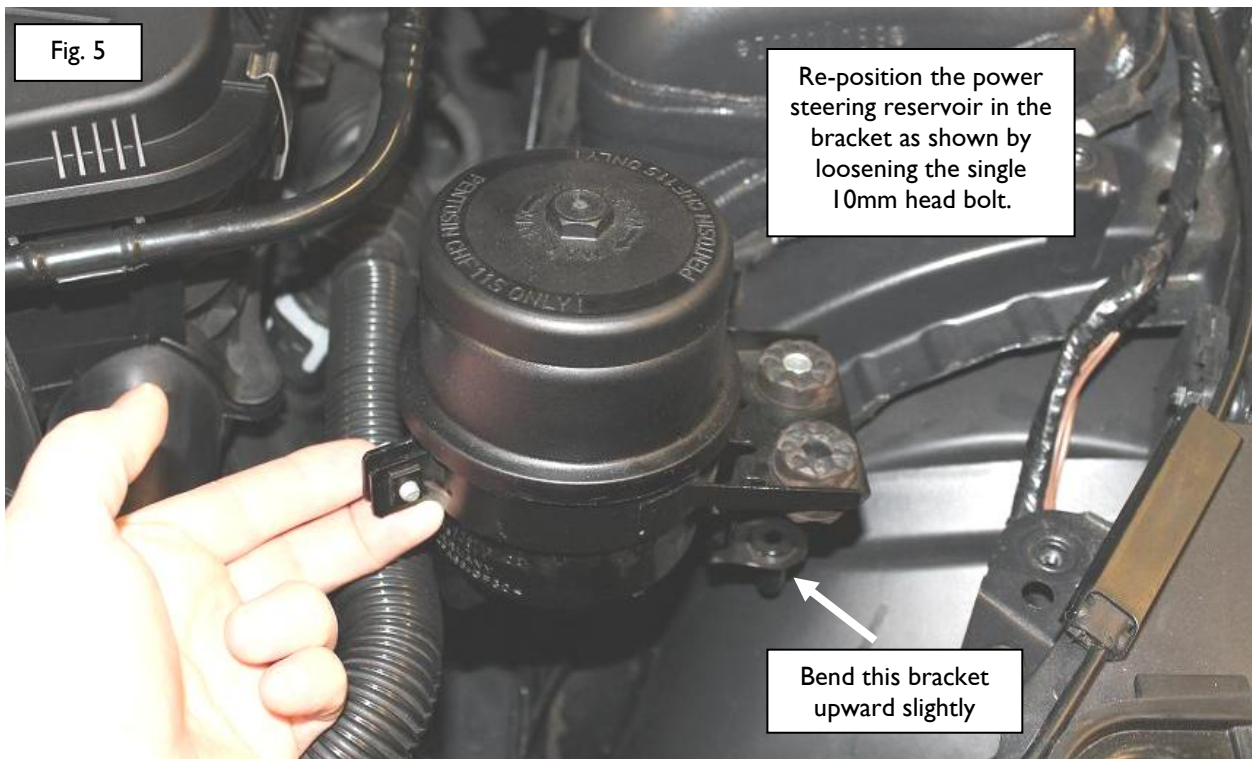
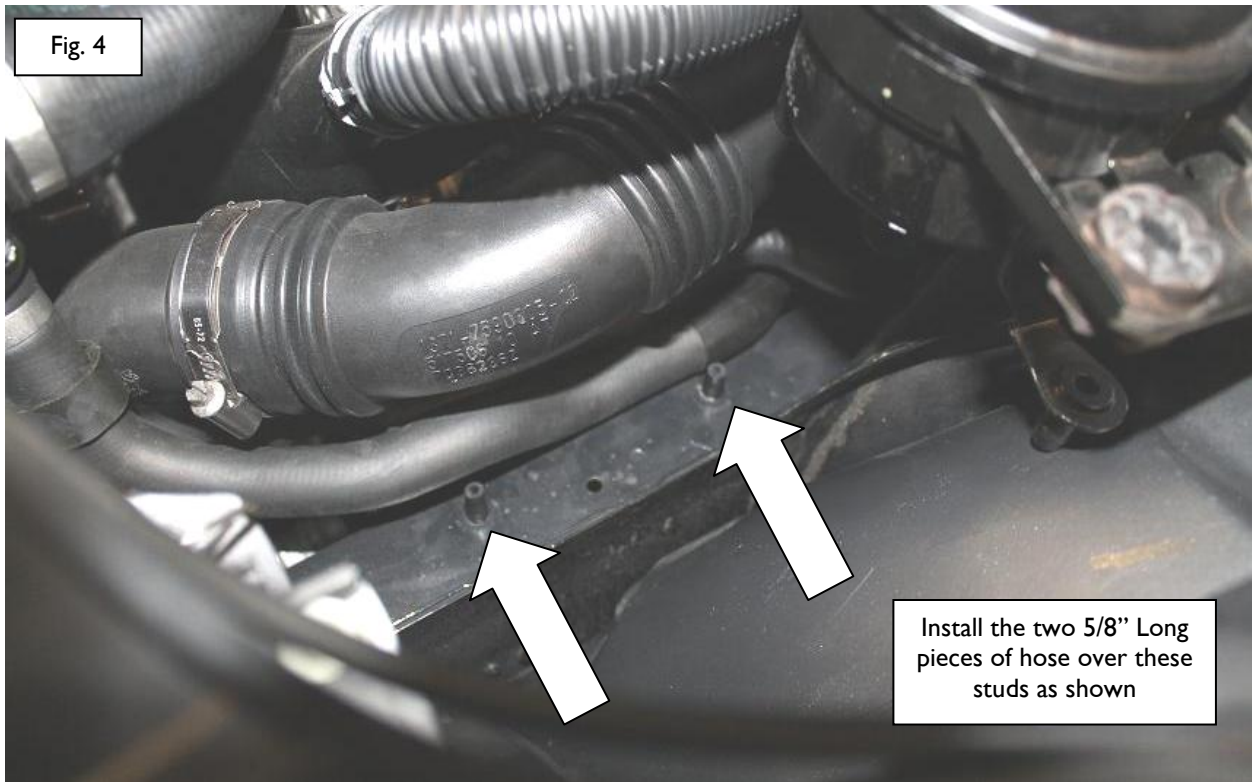
Relocate the Power Steering Reservoir

10. The long metal power steering reservoir bracket will need to be removed to create space for the new Carbon Intake Tube.
11. Remove the PS reservoir from the original bracket, saving the nuts and washers. Later cars will have nuts with large washers connected to them. Make sure the metal sleeves do not fall out of the rubber bushings.

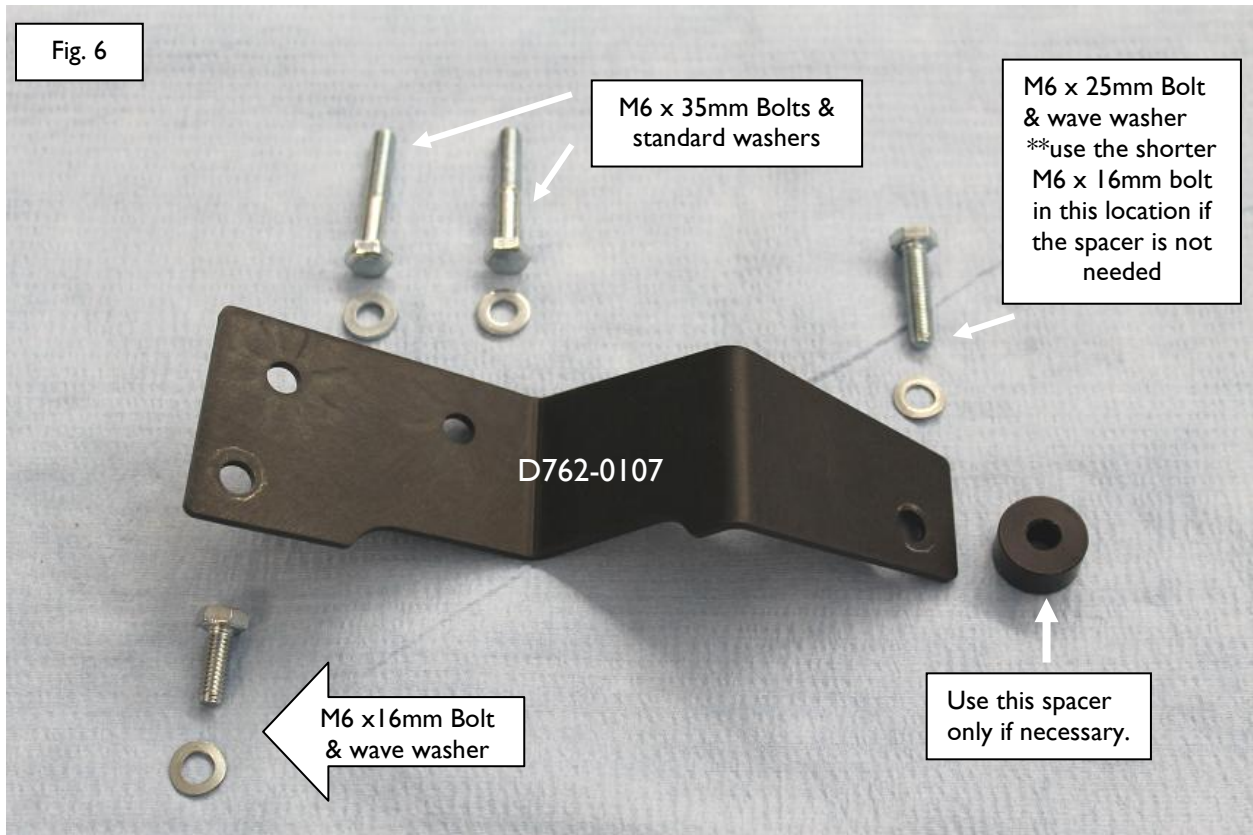


12. Remove the P/S reservoir bracket. This part will not be reused.

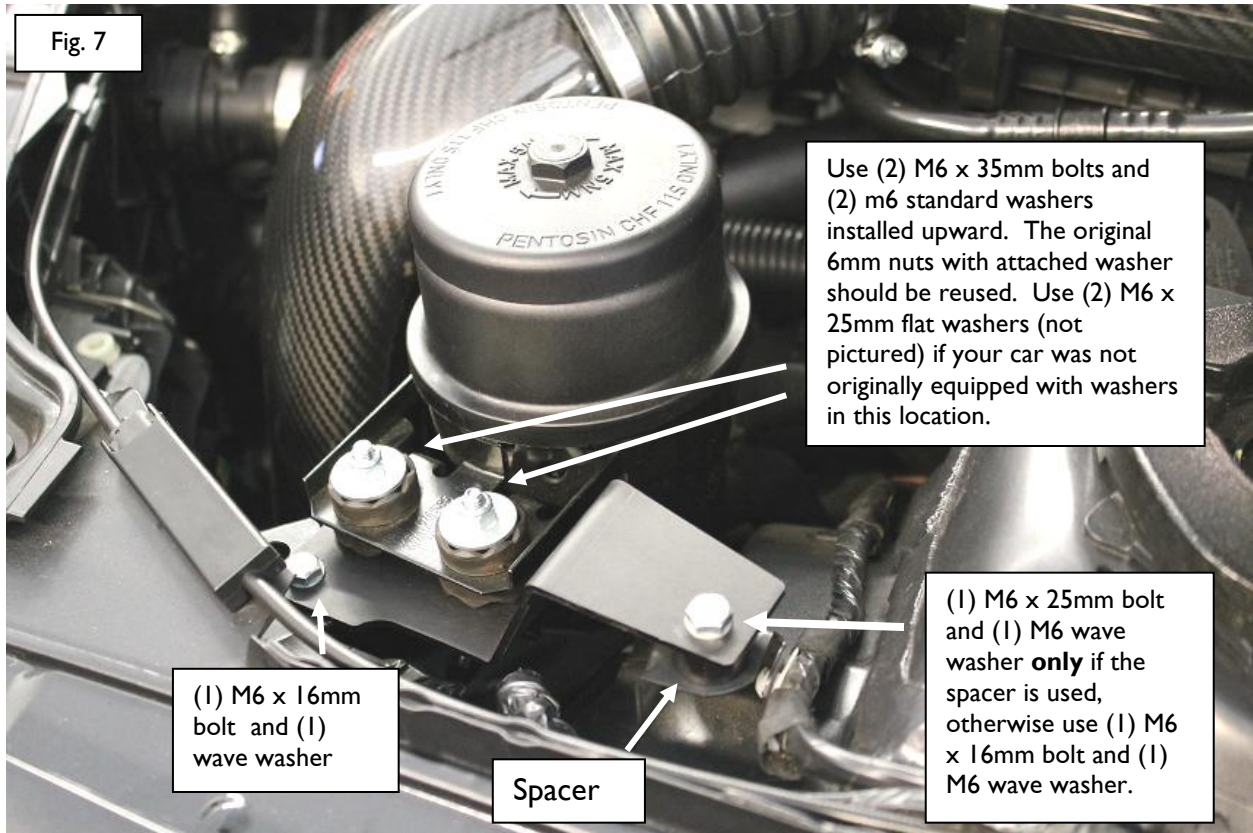
13. Locate the two D393-0027 5/8" long pieces of 3/16" hose, slide these over the two studs that are left sticking up on the frame rail where you removed the power steering reservoir. See **Fig. 4**. Reposition the P/S reservoir in the bracket as shown in **Fig. 5**. You will also need to bend the lower tab upward slightly as shown in **Fig. 5**.



14. Locate the **Power Steering Bracket (D762-0107)**, the **Spacer (D671-0108)**, one M6x25 bolt, two M6x16 bolts and two M6 wave washers. 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.

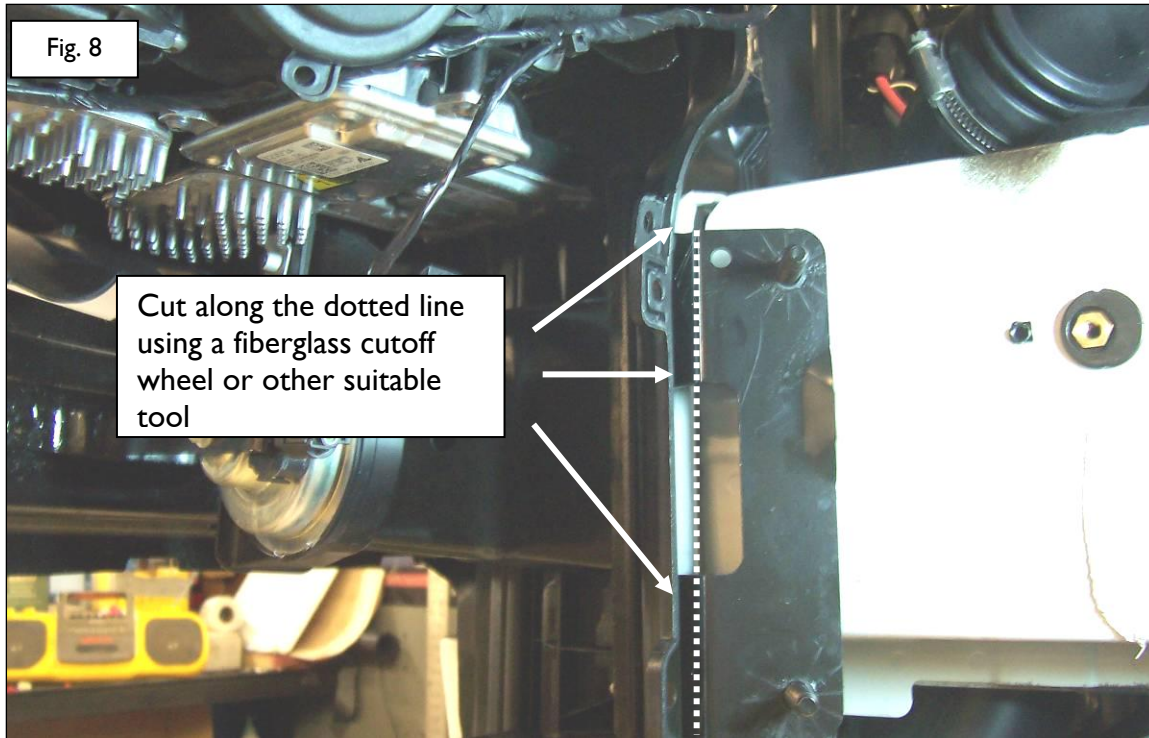


15. Mount the reservoir to the Dinan P/S Bracket using two M6x35 bolts, two standard 6mm washers and the original nuts w/encapsulated washers as shown in **Fig.7**. Use the two M6x25 flat washers if the car did not come with separate washers. Make sure the stock metal spacer bushings are still in place in the two rubber grommets.



Remove the Auxiliary Radiator Mounting Bracket

16. 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 **Fig. 8**.



17. Use a fiberglass cutoff disc held in a die-grinder to cut the Aux radiator mounting Bracket next to the bend (on the forward side of the bend) as shown in **Fig. 9**. 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.



18. Deburr the cut edges with a sanding disc or file.



Fig. 10

19. Mask off the remaining portion around the cut bracket and spray with at least two coats of black paint (see example in **Fig.10**)
20. The sharp plastic edge that is just in front of the auxiliary radiator bracket you just trimmed will need to be “rounded off” using a small angle grinder or other suitable tool (see **Fig. 11**). After the rounding off has been performed, place the small edge trim (D763-0085) over the metal bracket trimmed in **Step 16** as shown in **Fig. 11**.

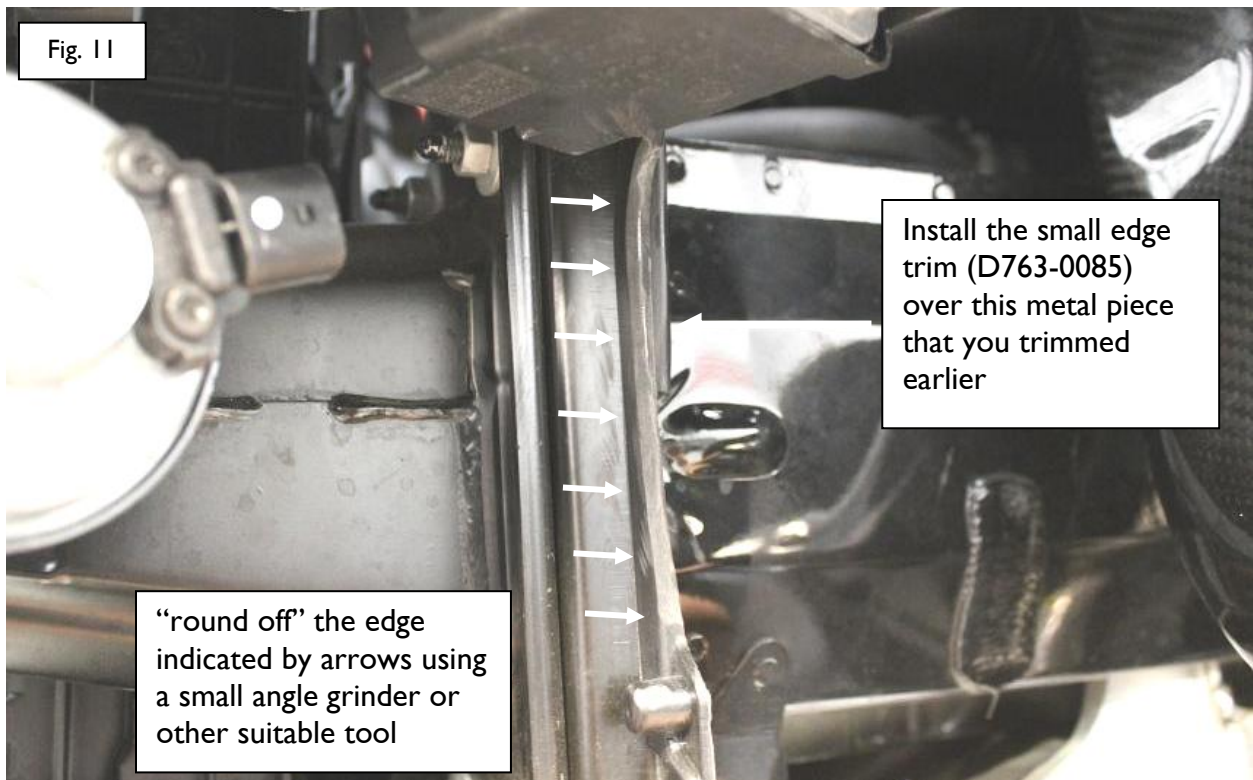


Fig. 11

Install the small edge trim (D763-0085) over this metal piece that you trimmed earlier

“round off” the edge indicated by arrows using a small angle grinder or other suitable tool

Install Filter, Airbox Lid and Intake Tube

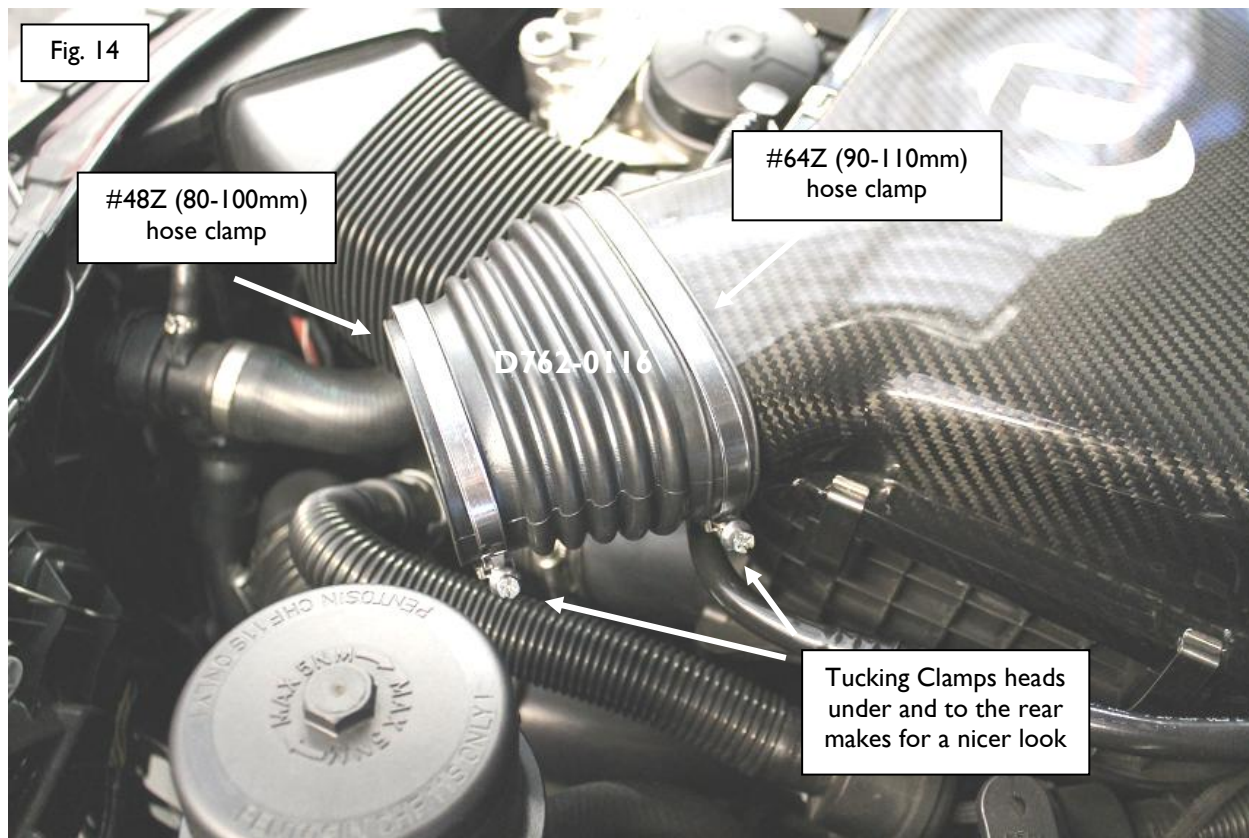
21. Remove the stock airbox lid and stock air filter.
22. Install the **Air Filter (KN33-2367)**. Make sure that the filter stays securely in place when installing the airbox top (see **Fig. 12**). If for some reason the loose piece of rubber seal was to get damaged and fall into the airbox it could severely damage the turbos.



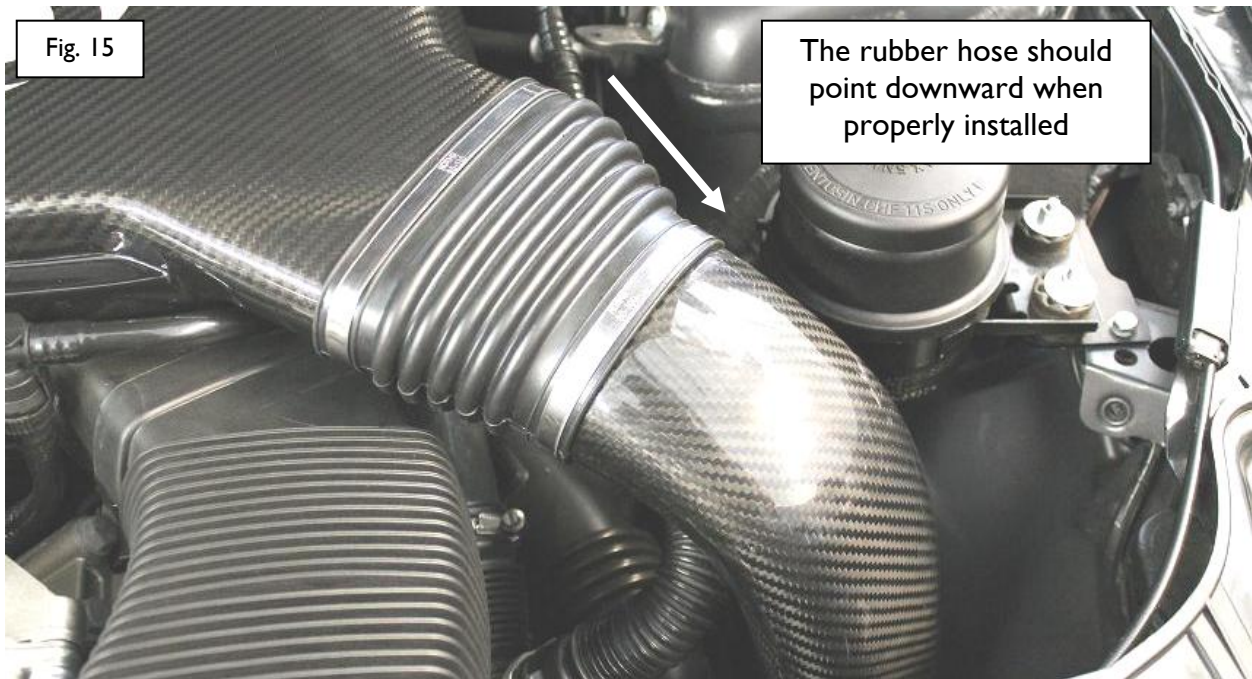
23. Locate the **Airbox Lid (D762-0117)**. This lid mounts the same as the stock lid but requires a little finesse to install. Insert the three Airbox Lid tabs into the airbox slots. Push the front of the Lid downward and rearward while wiggling a little side to side.



24. Locate the **D762-0116 Airbox Hose** and one **#64Z (90-110) Hose Clamp**. Fit the clamp onto the Hose as shown in **Fig. 14**. 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 (**See Fig. 14**). Place the clamp in position on the Airbox 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 when properly installed.

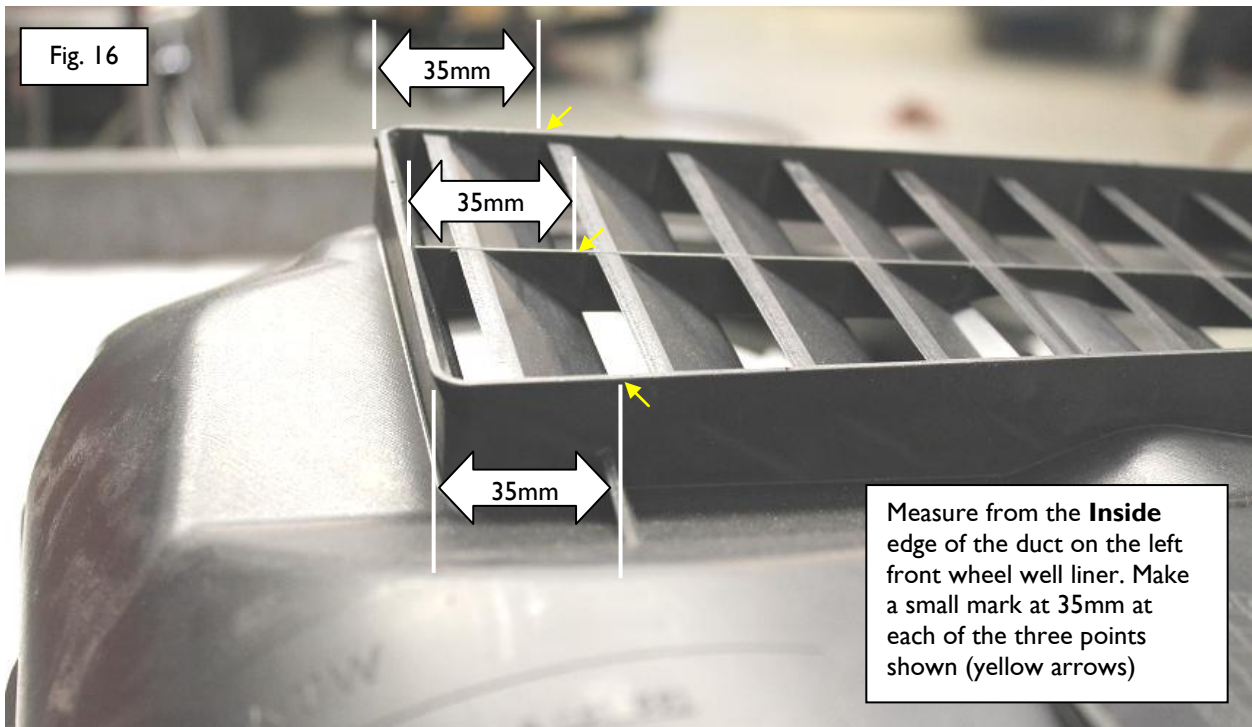


25. Locate the **D762-0115 Carbon Intake Tube** and one **#48Z (80-100) Hose Clamp**. Fit the clamp onto the Airbox Hose as shown in **Fig. 15** and install the Tube down into the space below the headlights and then into the Hose. Tighten the hose clamp with the Intake Tube rotated so it has the most “wobble room” at its lower end.



Modify the left front wheel well liner

26. The left front wheel well liner will need to be modified. Using **Fig's 16-19** measure and trim the duct with a 90° grinder or other suitable tool. Use the **Vent Cover (D762-0172)** as a guide to determine if you have trimmed enough material. The **Vent Cover (D762-0172)** should fit as shown in **Fig's 20 & 21**.



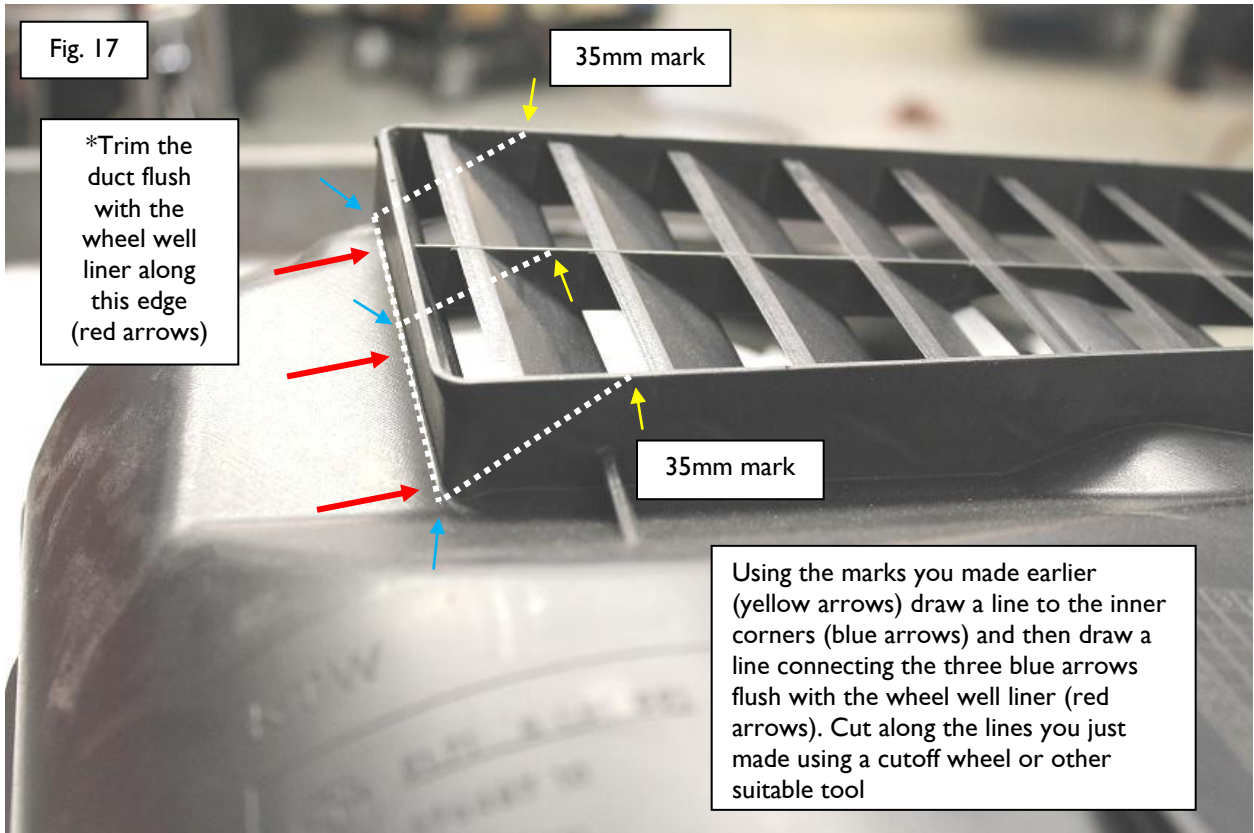
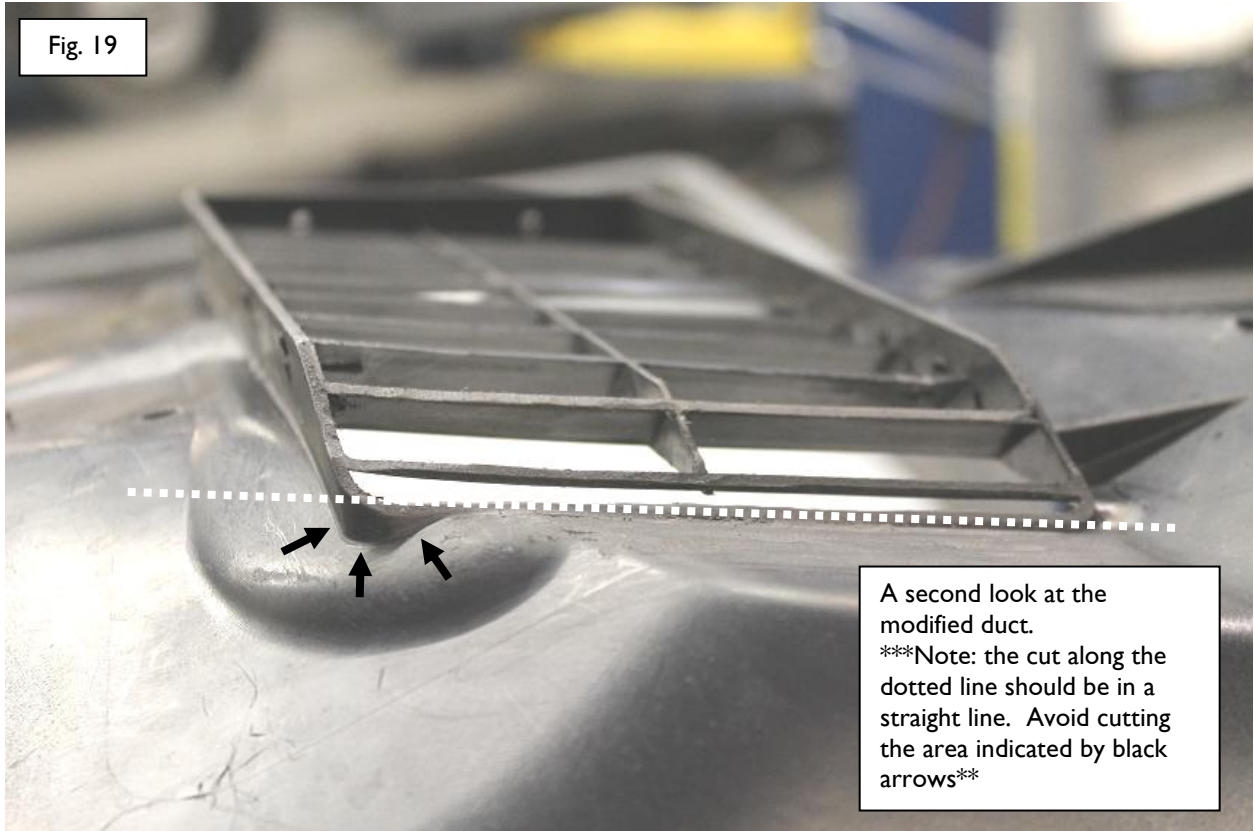


Fig. 19



A second look at the modified duct.
***Note: the cut along the dotted line should be in a straight line. Avoid cutting the area indicated by black arrows**

- 27. Use the **Vent Cover (D762-0172)** to verify you have trimmed enough material. If done properly there will be very little gap between the fender liner and the cover.

Fig. 20

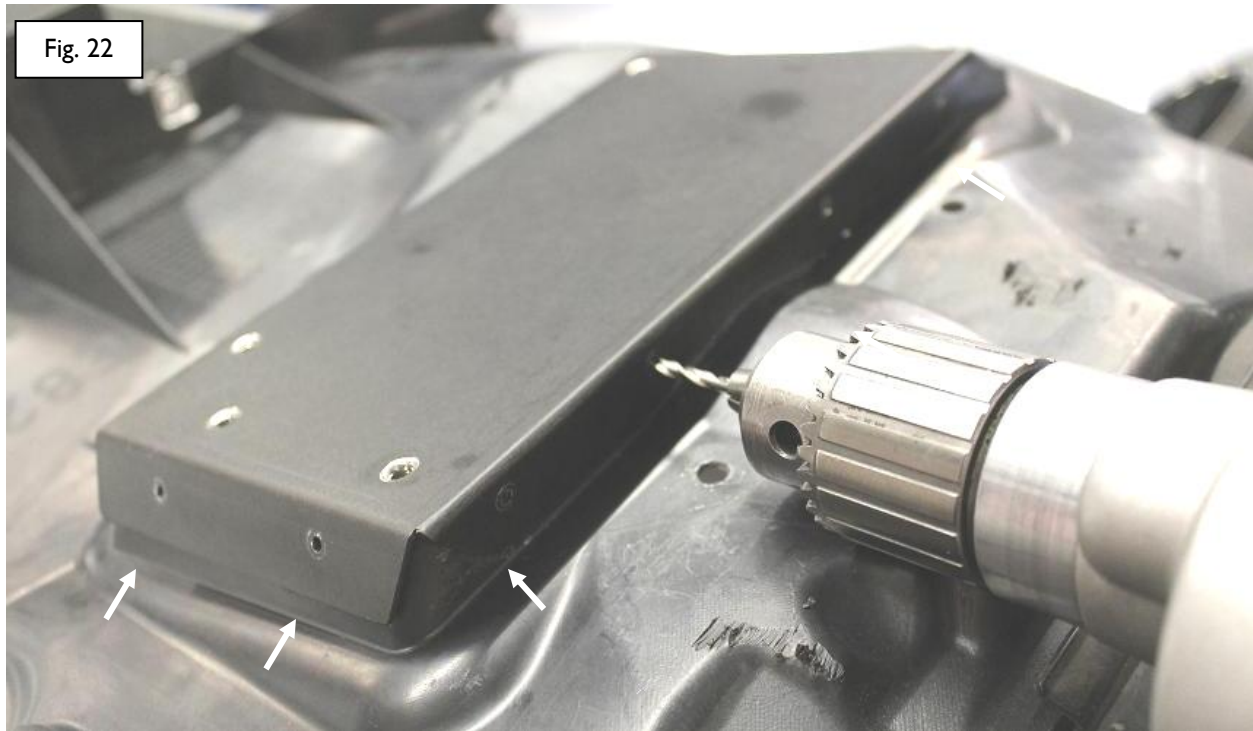


Fig. 21



Drill/Rivet the Vent cover to the Fender Liner

28. With the **Vent Cover (D762-0172)** in place drill thru the “pre-drilled” holes in the cover into the fender liner using an 1/8” drill bit.



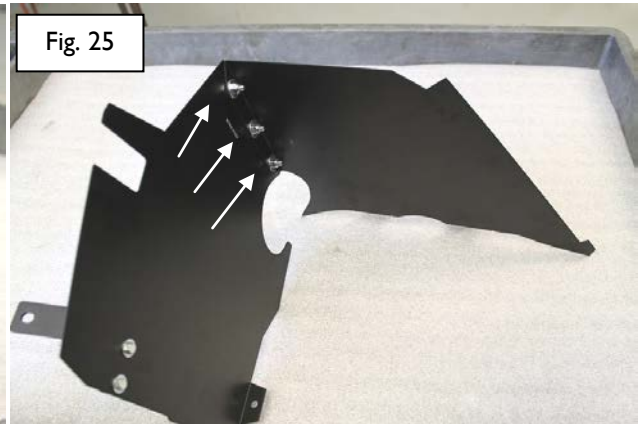
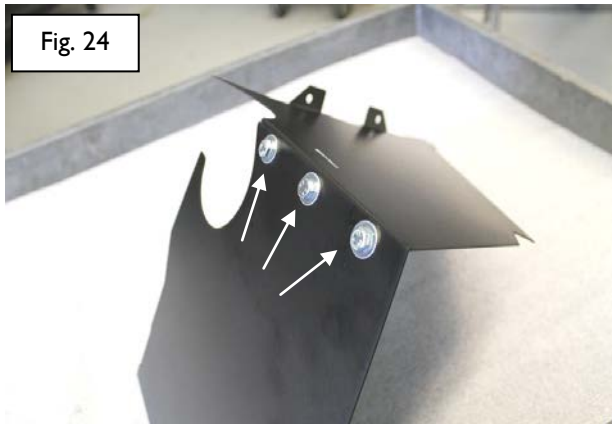
29. Locate the ten (10) 1/8” rivets. Secure the **Vent Cover** to the fender liner with the 10 rivets using a pop rivet gun. I highly recommend supporting the back side of the fender liner near the rivets (with a screwdriver or other suitable tool) while installing to avoid premature tear-out of the rivets since they are being secured into plastic.

30. **Fig. 23** shows the vent cover fully installed.

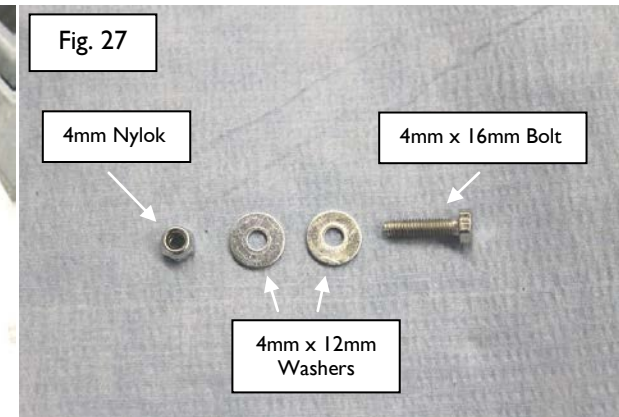
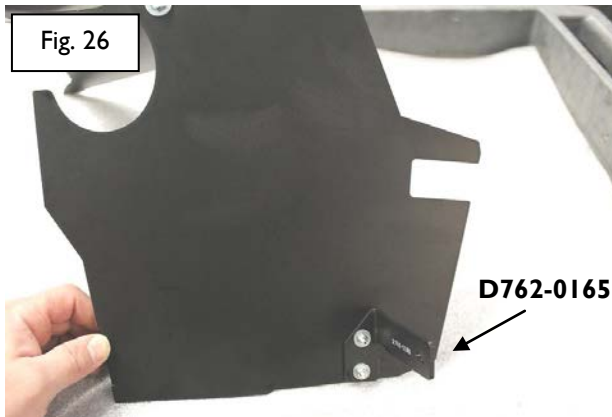


Assemble/Install the Heat Shield

31. Locate the **Upper Heat Shield (D762-0166)** and the **Lower Heat Shield (D762-0167)**. Using three 6mm x16mm bolts, six 6mm x18mm washers and three Nylok nuts assemble the heat shield as shown in **Fig's 24 & 25**.



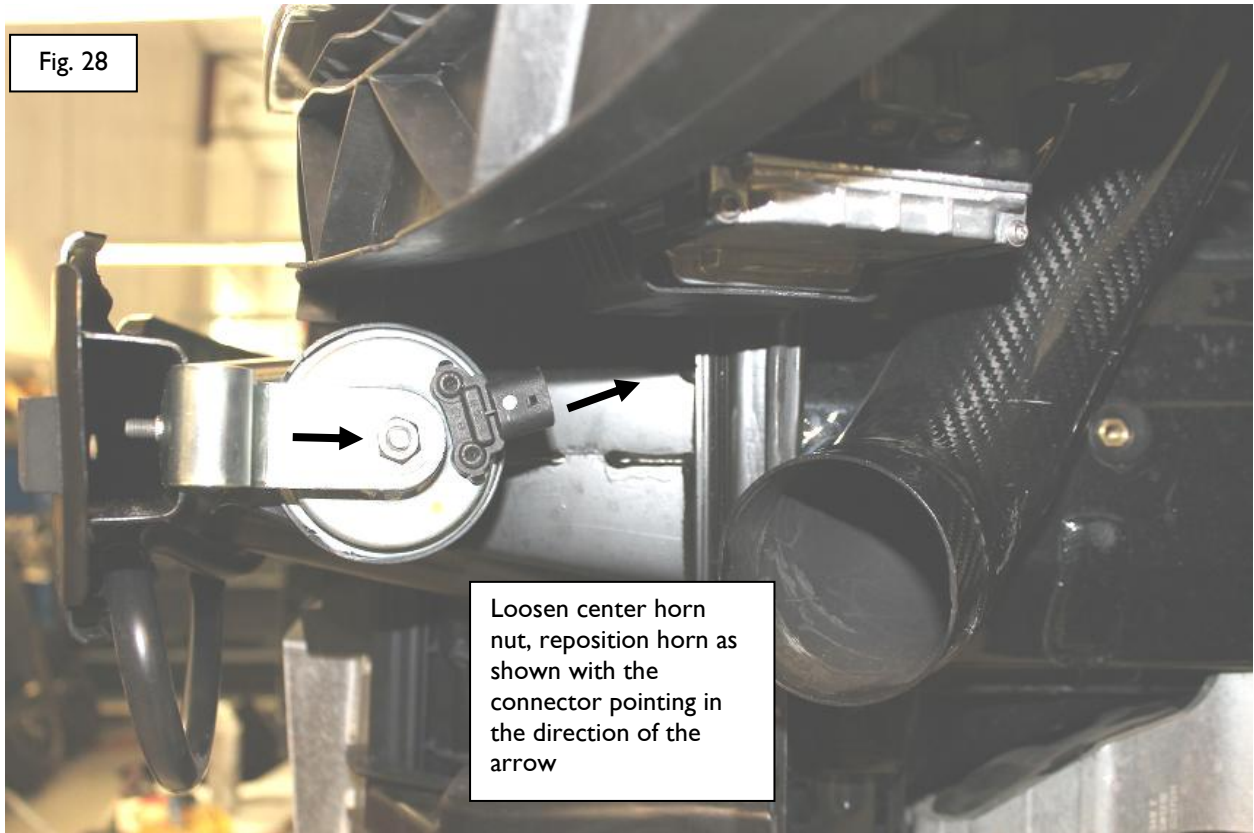
32. Locate the small **Heat Shield Bracket (D762-0165)** and install as shown in **Fig. 26** using two 4mmx16mm bolts, four 4mmx12mm washers and two 4mm Nylok nuts.



Install the Heat Shield Assembly

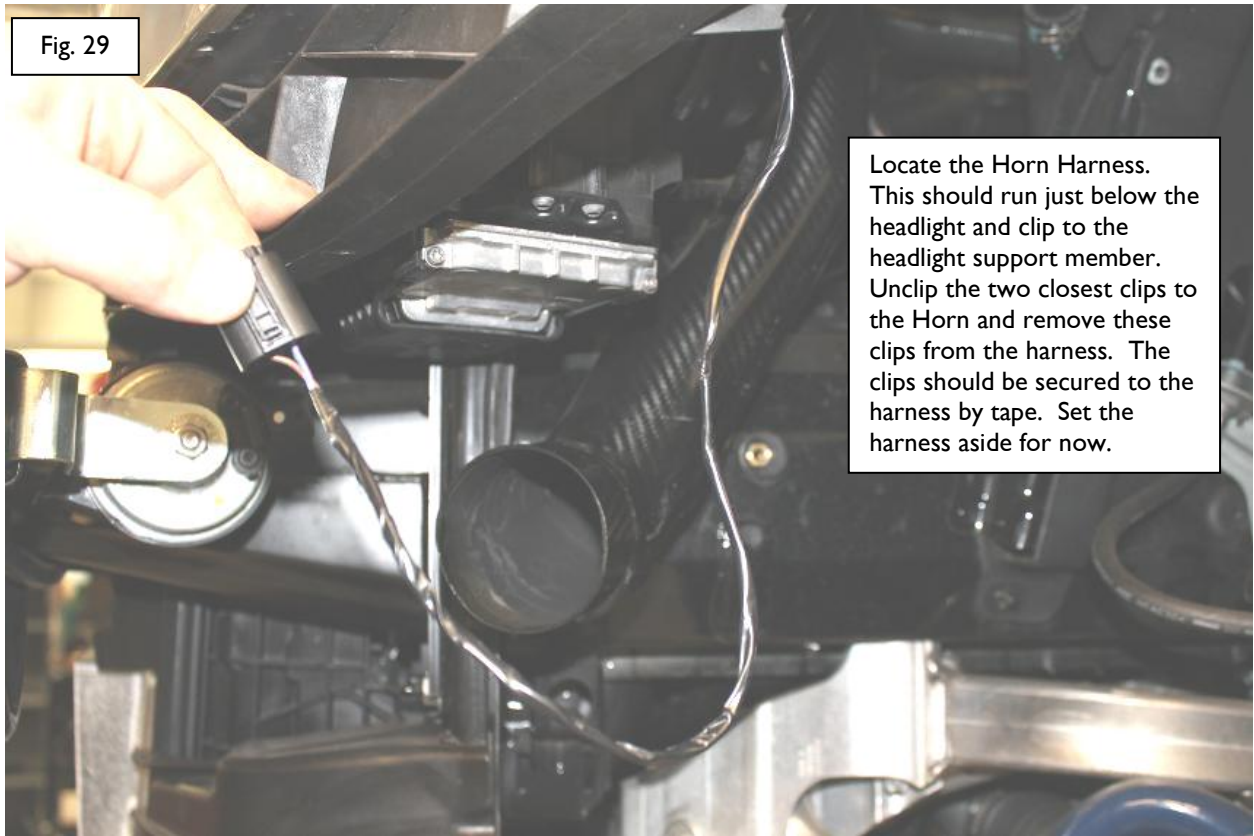
33. Loosen the center nut securing the horn and reposition as shown in **Fig. 28**. Modify the horn harness as shown in **Fig. 29**.

Fig. 28



Loosen center horn nut, reposition horn as shown with the connector pointing in the direction of the arrow

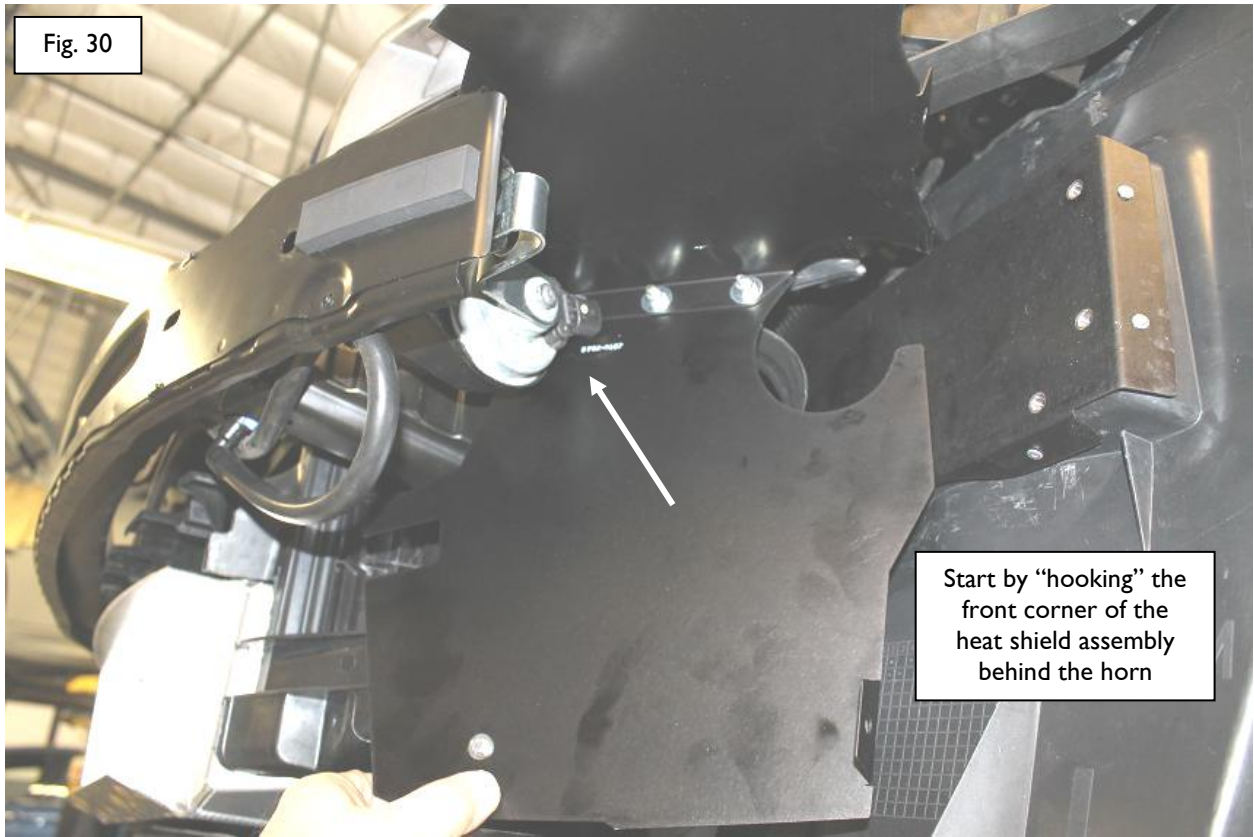
Fig. 29



Locate the Horn Harness. This should run just below the headlight and clip to the headlight support member. Unclip the two closest clips to the Horn and remove these clips from the harness. The clips should be secured to the harness by tape. Set the harness aside for now.

34. Temporarily install the modified left front wheel well liner using all the original screws to properly locate the liner. Install the heat shield assembly using **Fig. 30** for reference.

Fig. 30



Start by “hooking” the front corner of the heat shield assembly behind the horn

Fig. 31



While guiding the carbon fiber tube thru the cutout in the heat shield press the rear corner into position

Fig. 32

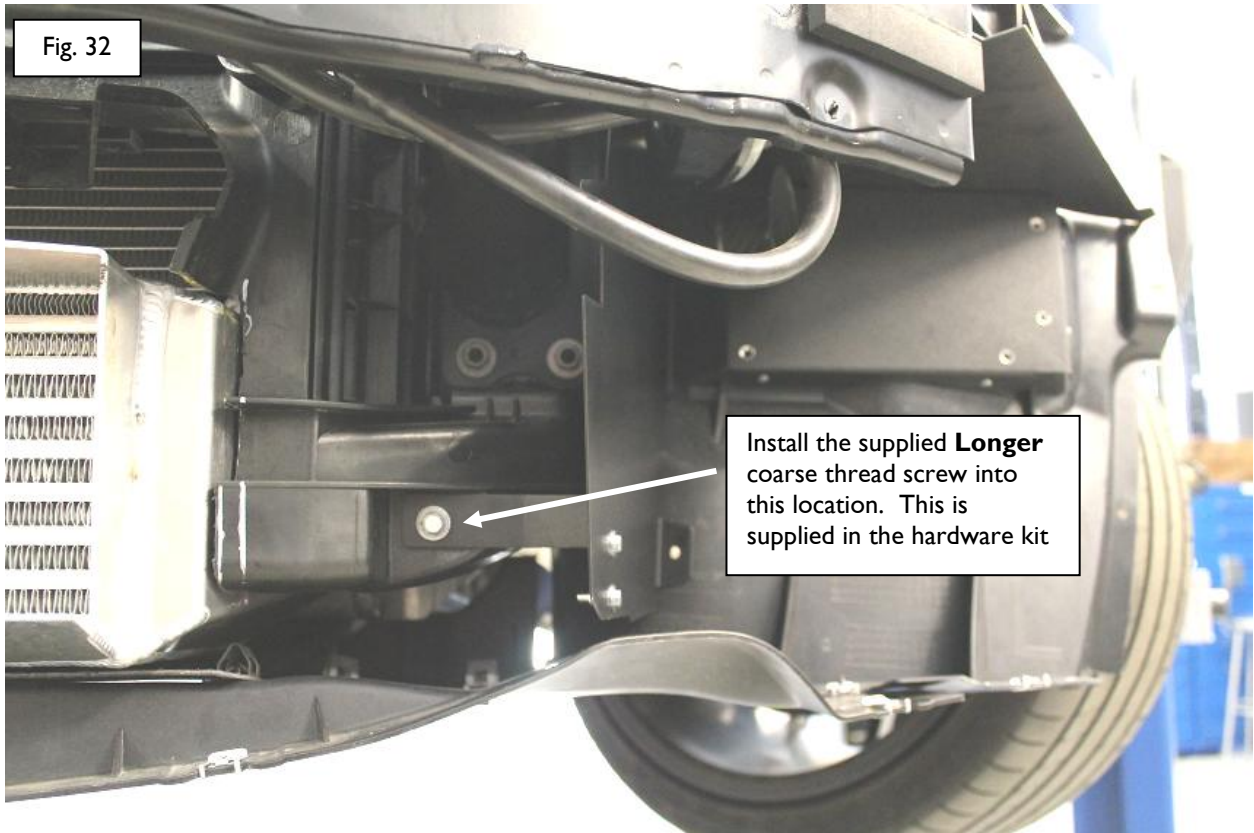


Fig. 33

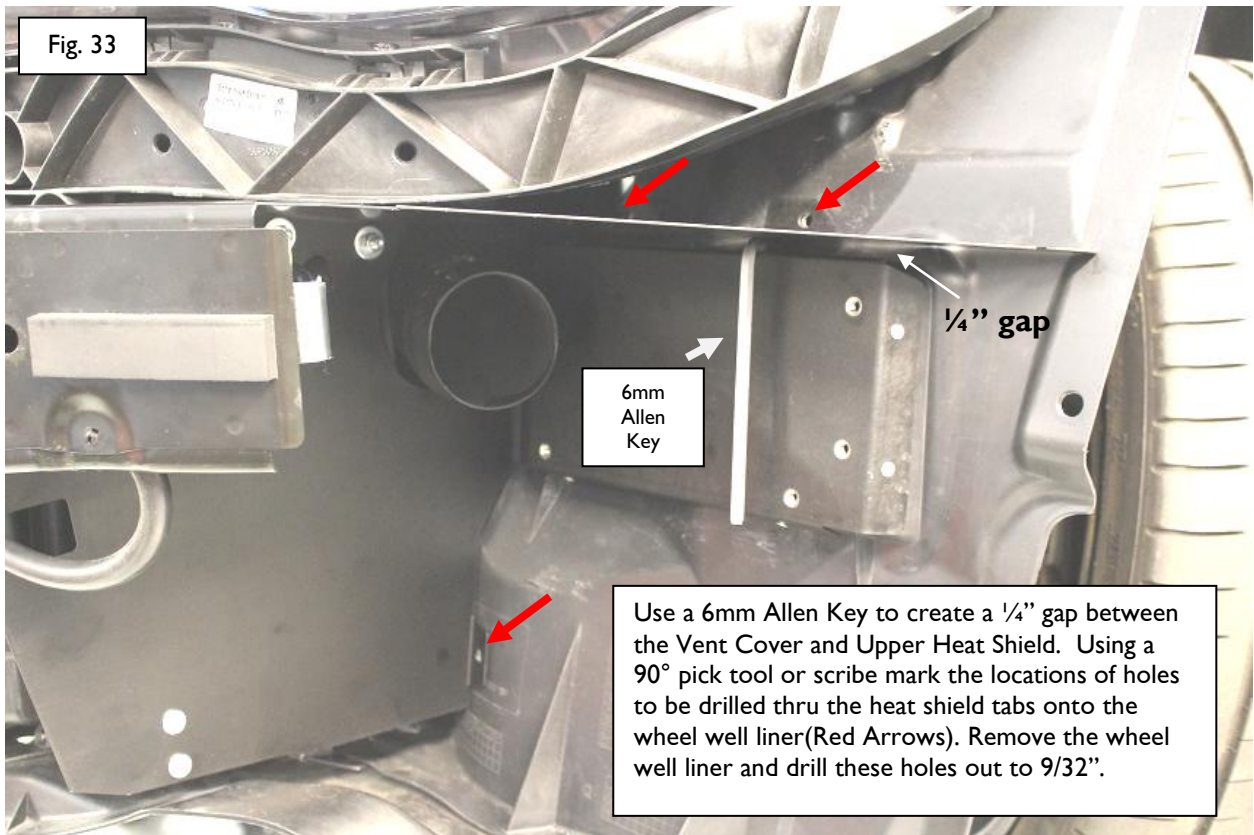


Fig. 34

After removing the wheel well liner route the horn harness through the same cutout as the carbon fiber tube. Install the horn wire sleeve (D393-0026) to protect the harness from being cut by the edge of the heat shield.

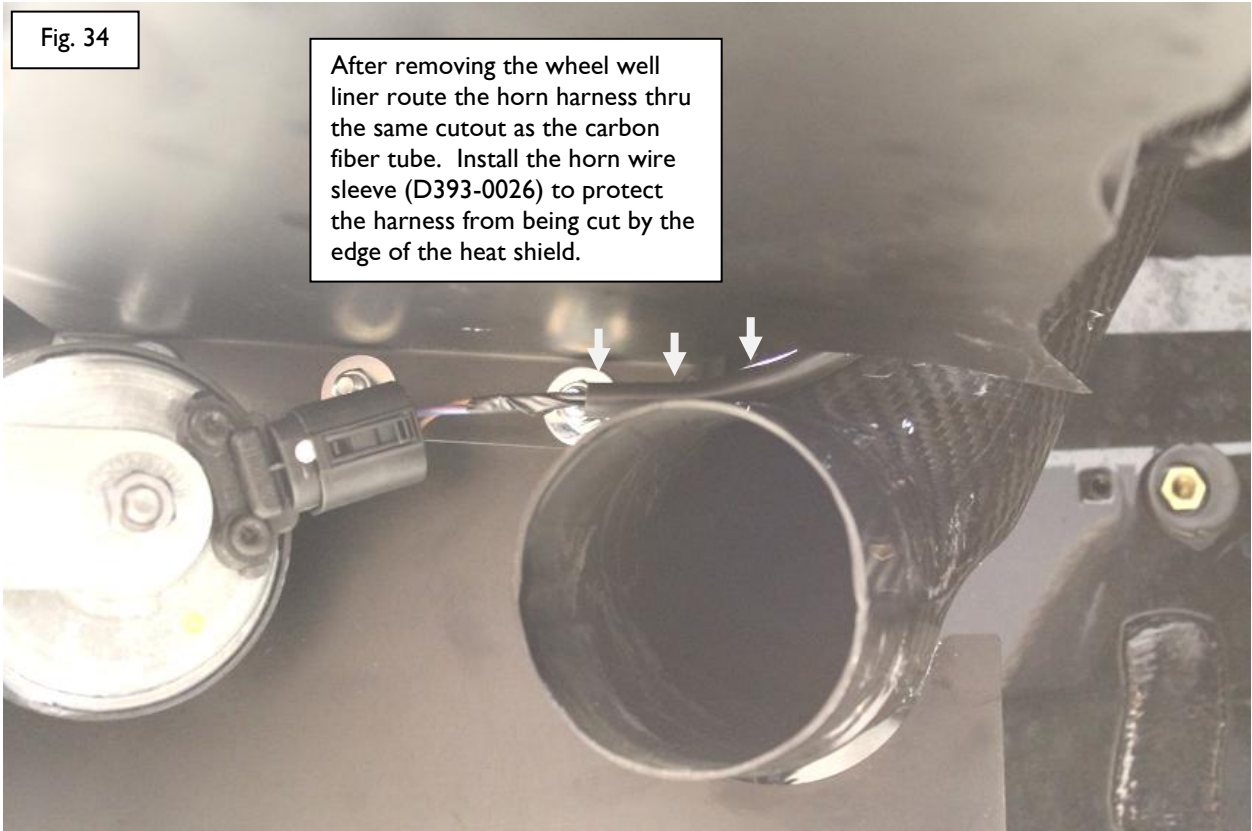
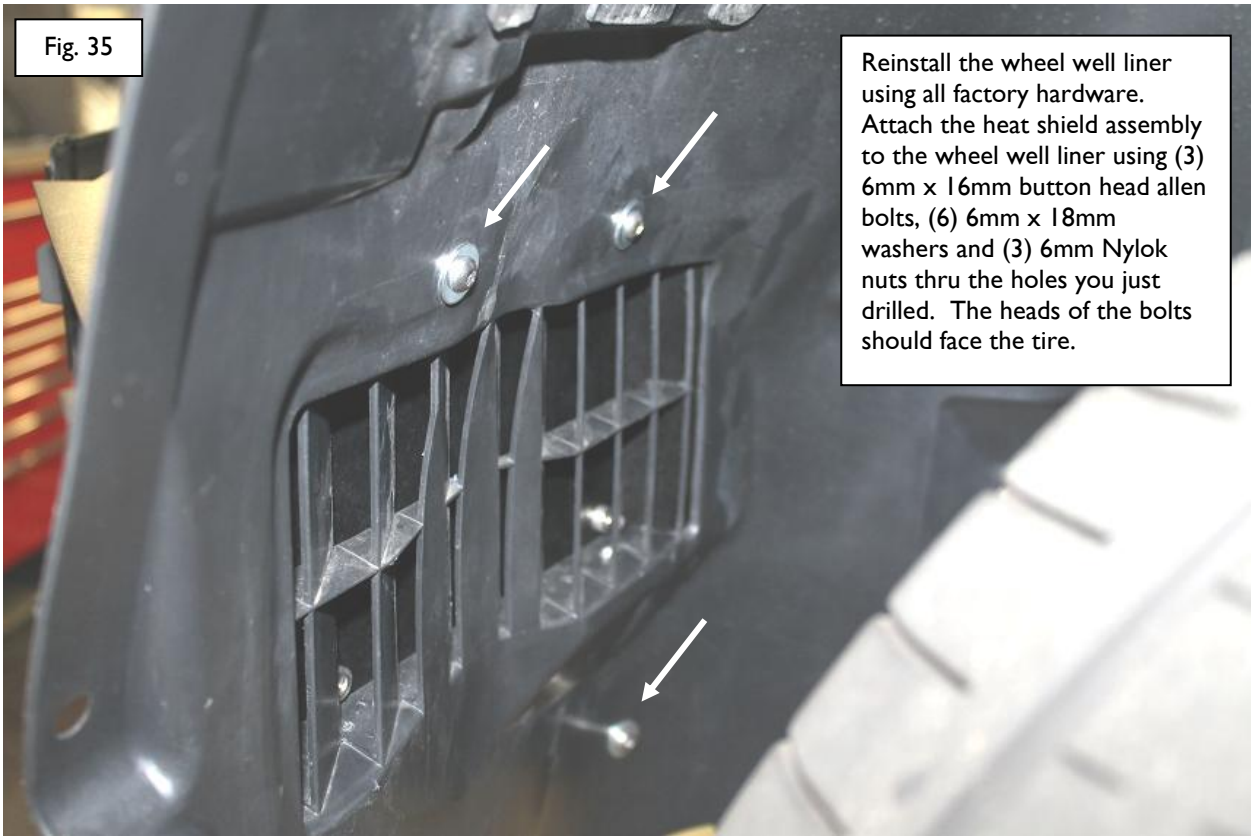


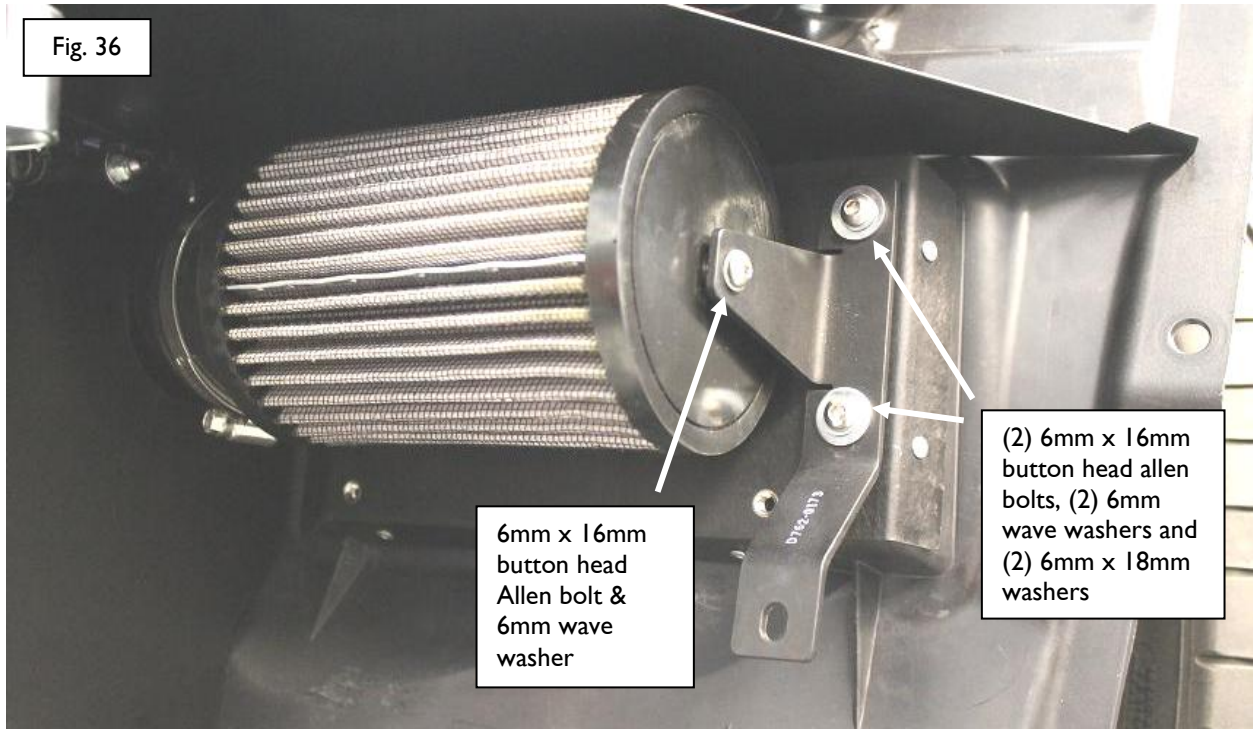
Fig. 35

Reinstall the wheel well liner using all factory hardware. Attach the heat shield assembly to the wheel well liner using (3) 6mm x 16mm button head allen bolts, (6) 6mm x 18mm washers and (3) 6mm Nylok nuts thru the holes you just drilled. The heads of the bolts should face the tire.

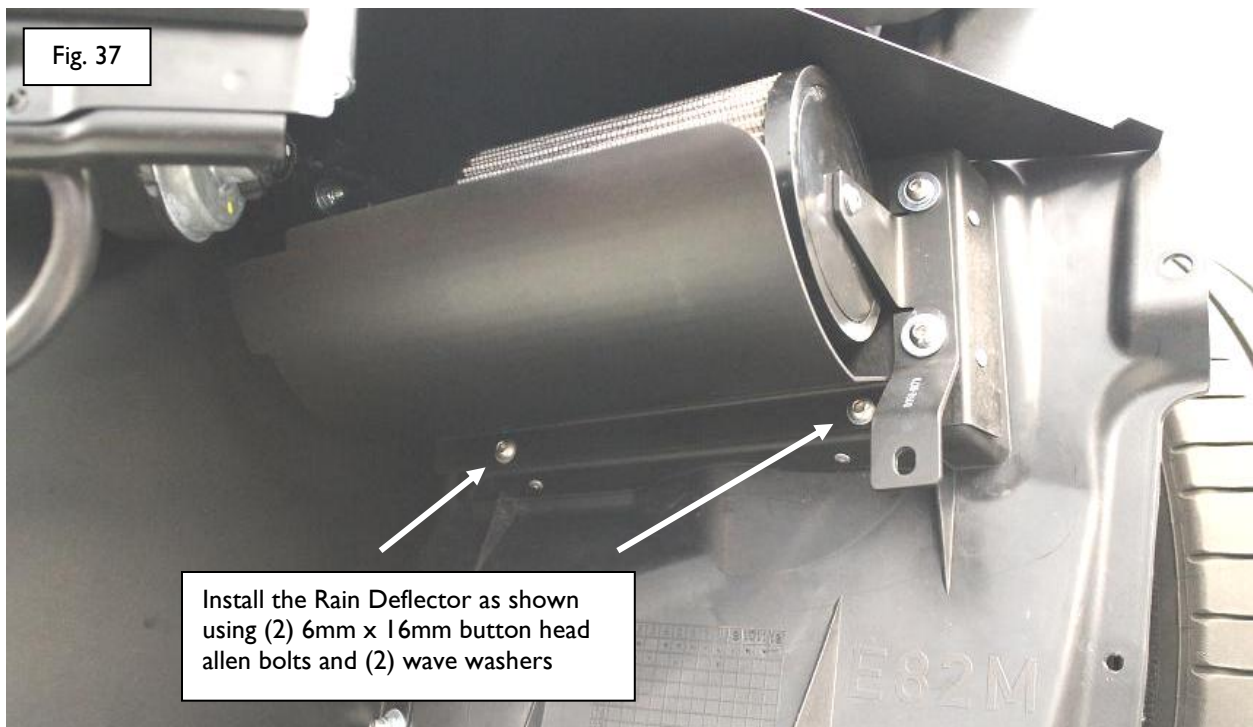


Install the Filter, Bracket and Rain Deflector

35. Locate the **Filter (D401-0016)** The **Filter Bracket (D762-0173)** and the **Rain Deflector (D762-0174)**. Install the Filter w/ clamp on to the end of the carbon fiber tube. Twist the filter into the most horizontal position possible. Install the **Air Filter Bracket (D762-0173)** using the hardware listed in **Fig. 36**. Tighten the air filter clamp after all hardware has been installed.

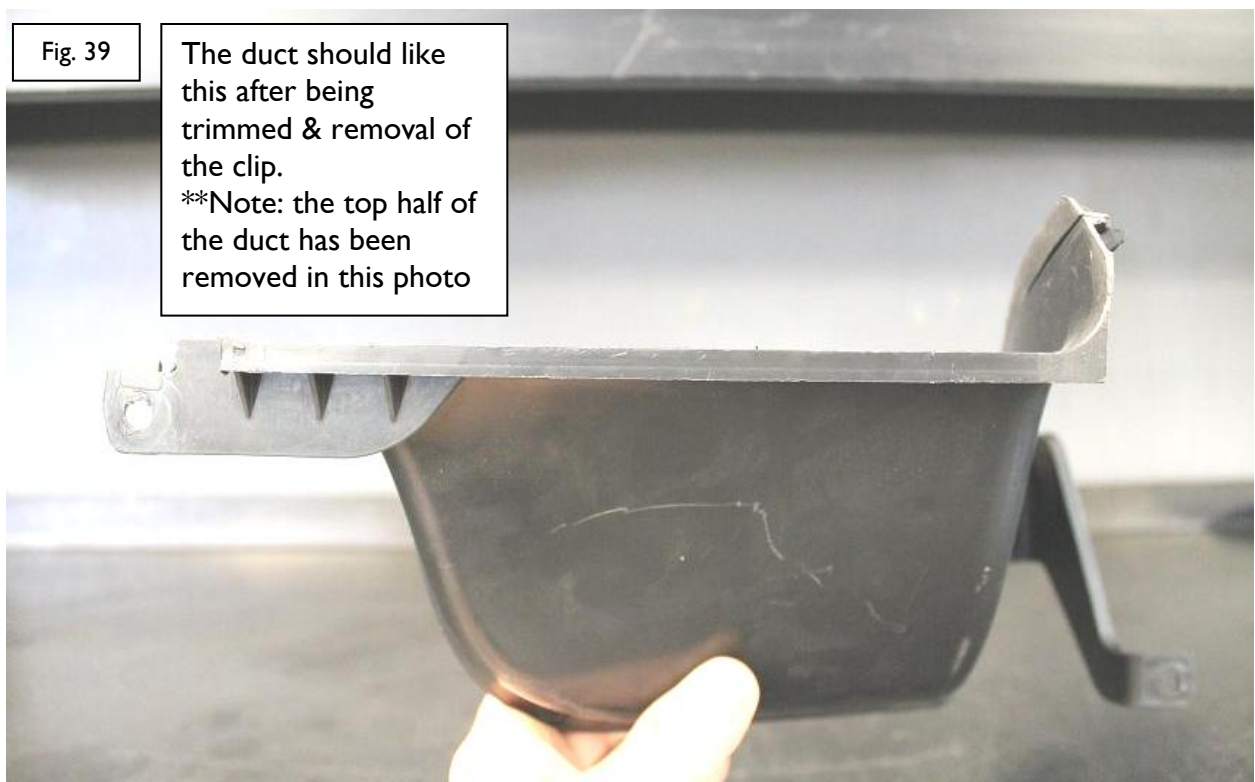
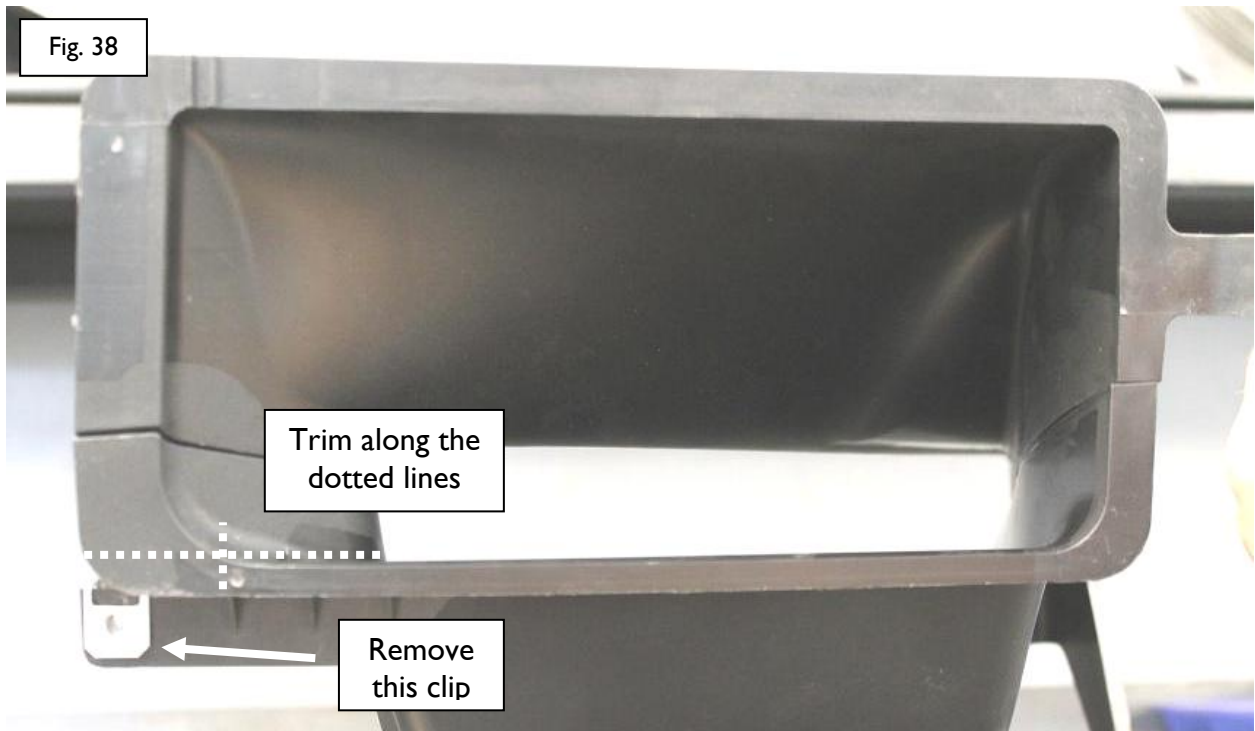


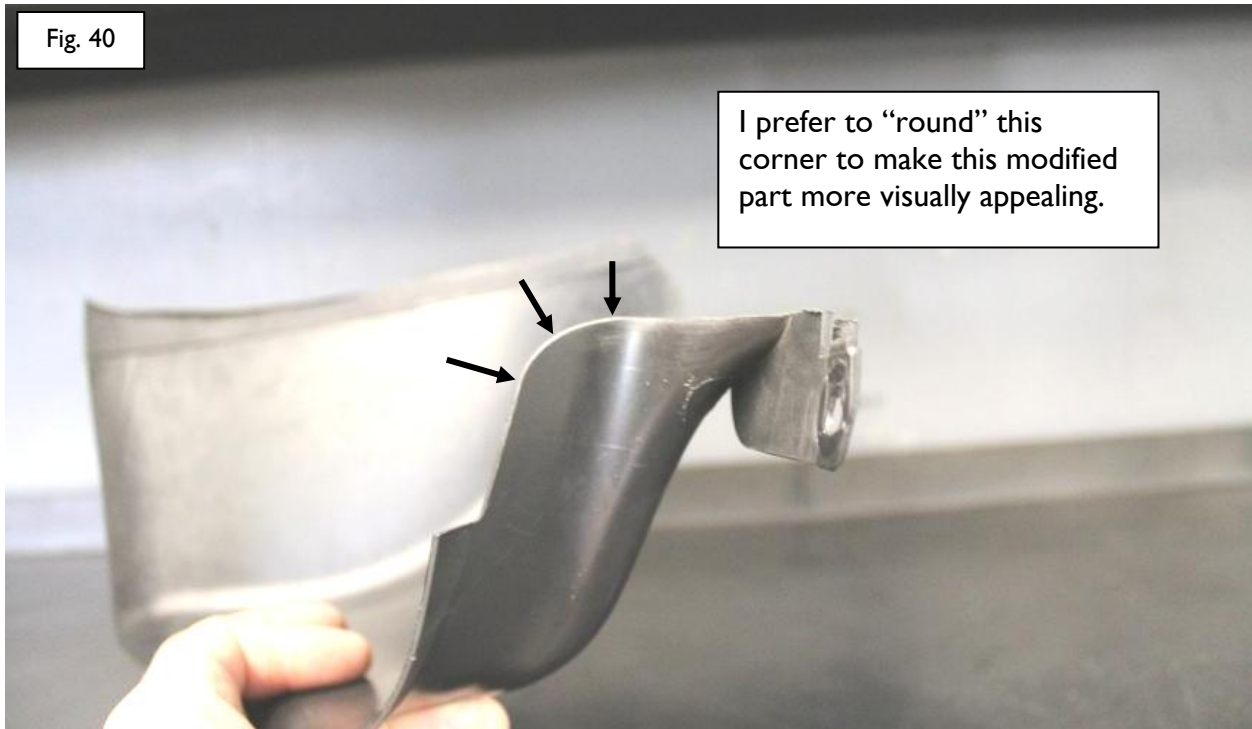
36. Install the Rain Deflector as shown in Fig. 37.



Modify and install the left side duct

37. Locate the black plastic duct that you removed from the auxiliary radiator in step 8. This part will need to be modified before reinstallation. Using **Fig. 38-40** trim the duct using a body shop saw or other suitable tool.





38. The top half of the duct also needs to be modified. Refer to **Fig. 41** and **Fig. 42**.

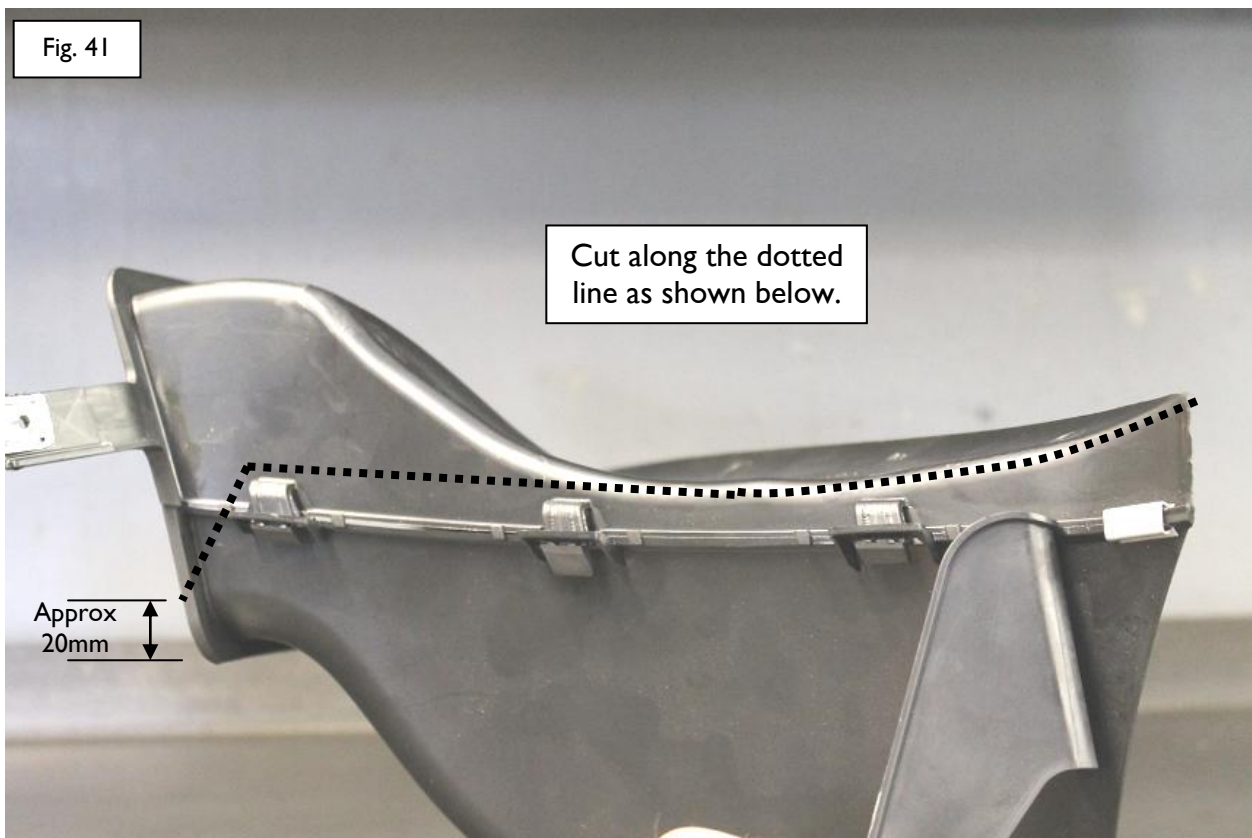
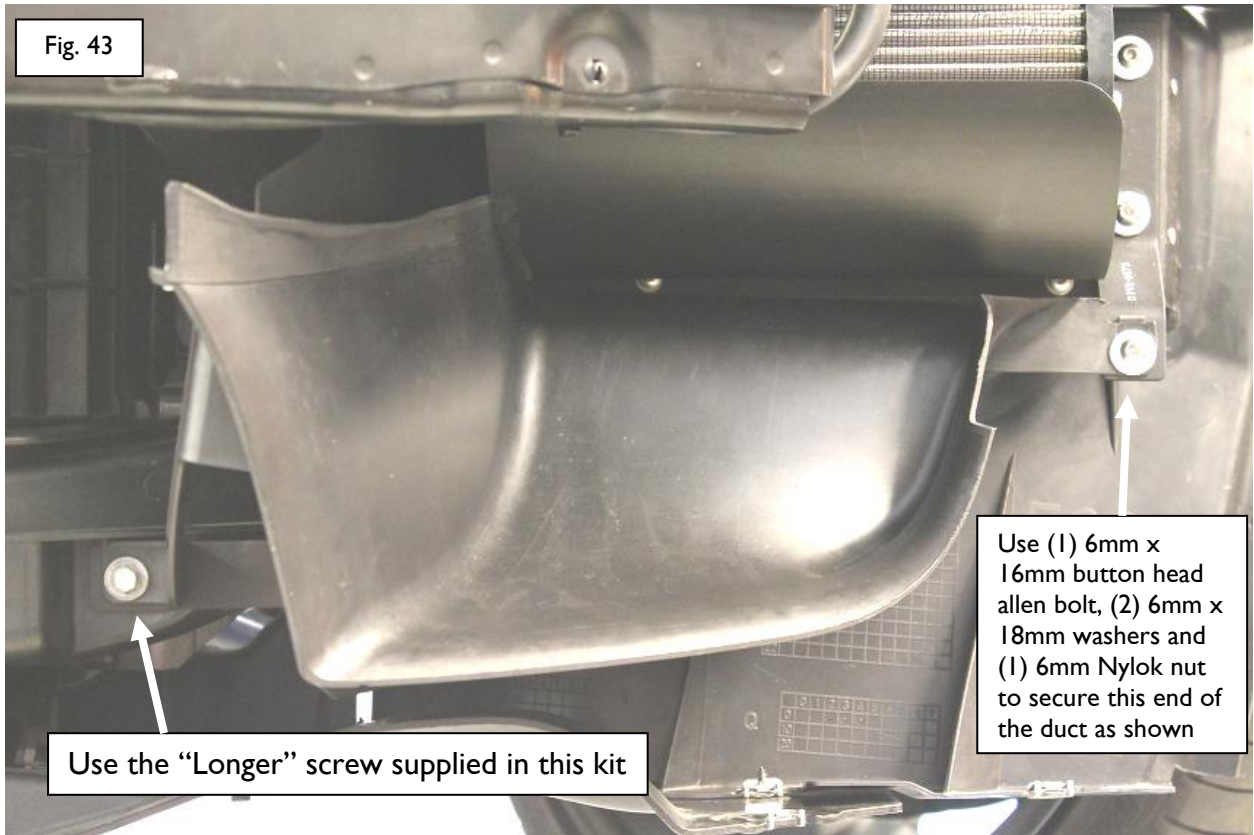


Fig. 42

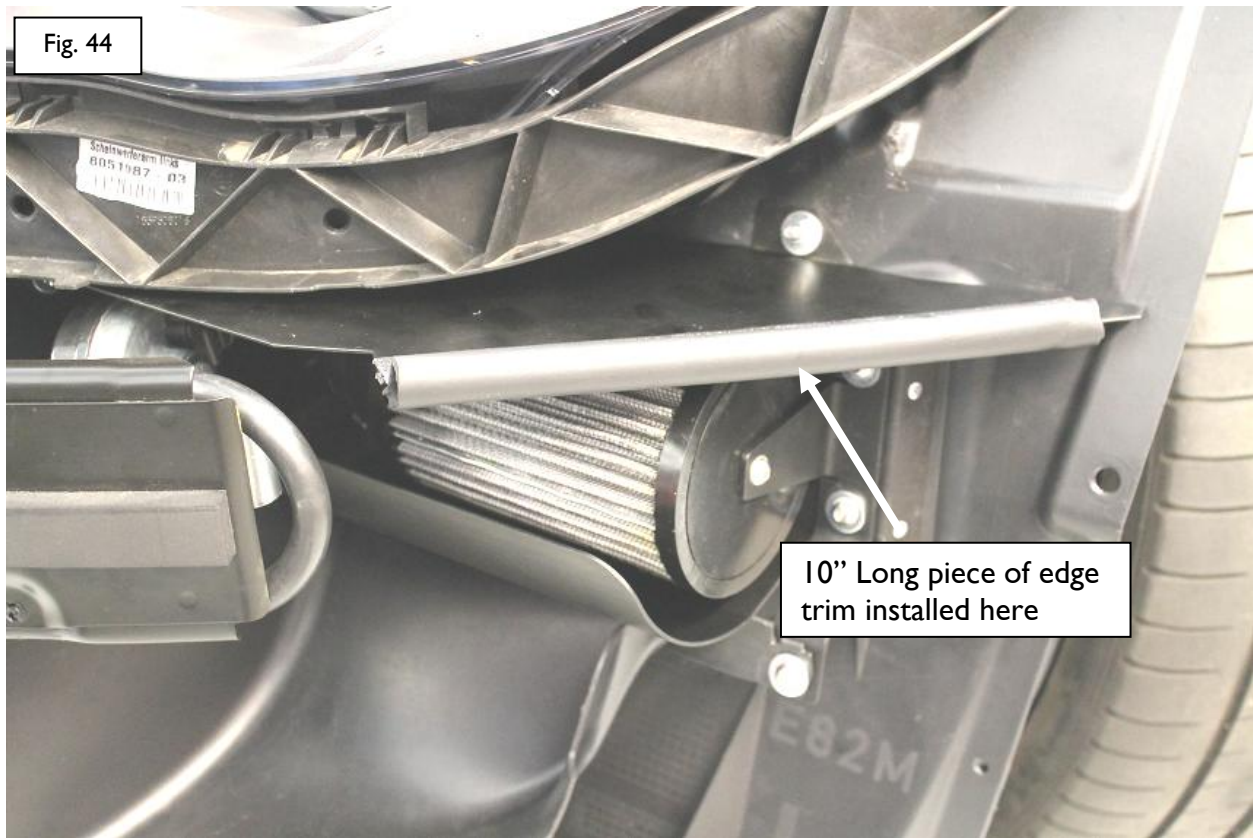


39. Install the modified duct as shown in Fig. 43.

Fig. 43



40. Install the **10" Edge Trim (D763-0084)** as shown in **Fig. 44**



41. Reinstall the front bumper skin and the intake duct above the radiator.
42. Reinstall and torque the front wheel(s).
43. Fill and bleed the cooling system as per TIS document # 17 00 039.

Happy Motoring!