

PREFACE

The 2013 BMW 335i is fairly new, so there is not yet a released repair manual for the die-hard tinker. I picked mine up in April 2013. Test drove a fully equipped M-Sport version that had a price tag of \$57K. I opted for the sports-line package. I figured most of everything else is purely cosmetic; the engine and transmission are what's important. And, there are more options in the aftermarket area for parts. I have done quite a few upgrades myself since April: low beam realignment, bumper reflectors, carbon fiber mirror caps, aFE intake, xenon bulb upgrade, turn signal bulb upgrade, fog light bulb upgrade, rear spoiler, BMS Stage 1 tune, Bilstein PSS10 coil-over install, 20" rims. I was able to find helpful instructions for these upgrades. However, I was not able to find sufficient details on how to perform an M-sport front bumper swap. The only helpful information I could find was that time lapse video from Turner. The video showed how long it took, how tedious it was and the parts involved were many; really not something that you can just watch and perform the swap yourself. I had to spend quite some time studying the schematics from RealOEM. I thought I would document this project and share it with everyone. Still, thanks to Turner for releasing the video. Thanks to RealOEM for publishing those nice schematics.

WARNING

This is just another man's way of doing a swap. The Dealer would probably do it differently, LT BMW would have done it differently, and I bet your local shop would have done it differently as well. I take no responsibility if you use my project documentation and perform the swap yourself – breaking your car. Really, this is for the gearheads.

If you worry about warranty – you shouldn't do this. If you don't already own basic tools (hydraulic jack, socket sets, screw drivers, drill, pliers, torx bits, etc) – you shouldn't do this. From a max difficulty rating of 10: installing rear spoiler is a 1, xenon bulb replacement is 2, BMS tune is a 3, intake is a 3, coil-over install is a 6, m-sport front bumper swap is a 7 – just because of what I had to do to remove the "deformation elements". Two stinking torx bolts - otherwise it would have been a 5.

When doing the installs, take your time. Study all the schematics. Layout all the parts and position where they are supposed to go. Looks daunting when all the parts are on the floor, but do not get discouraged. Everything actually fits!

ASSUMPTION

To save time, these items should be taken care of first.

Study the schematics from RealOEM.

The retrofit kit: I got it from getbmwparts dot com. They are knowledgeable and responds to email inquiries pretty fast.

QUANTITY		PART NUMBER / DESCRIPTION	BIN	LIST	NET	AMT
SHIP	B. O.					
1	0	51-11-8-060-120 REPAIR KIT FOR BRAC	0038A	46.31	37.05	
10	0	51-11-1-908-077 EXPANDING RIVET	0070B	0.31	0.25	
1	0	63-14-7-847-205 SIDE MARKER LIGHT,	0084A	20.57	16.46	
1	0	63-14-7-847-206 SIDE MARKER LIGHT,	0084A	20.57	16.46	
1	0	51-74-8-054-228 AIR DUCT, BOTTOM	0206A	30.27	24.22	
1	0	51-74-8-054-229 AIR DUCT, BRAKE, LE	0206A	30.27	24.22	
1	0	51-74-8-054-230 AIR DUCT, BRAKE, RI	0206A	30.27	24.22	
1	0	51-71-8-055-019 DEFLECTOR LIP LEFT	0215A	31.70	25.36	
1	0	51-71-8-055-020 DEFLECTOR LIP RIGHT	0215A	31.70	25.36	
1	0	51-74-8-054-232 AIR DUCTING FOR AMO	0251B	30.27	24.22	
1	0	51-11-8-051-189 DEFORMATION ELEMENT	0331A	25.63	20.50	
1	0	51-11-8-051-190 DEFORMATION ELEMENT	0331A	25.63	20.50	
1	0	51-11-8-054-186 SHOCK ABSORBER FRON	0401A	76.68	61.34	
1	0	51-11-8-054-132 INSERT, AIR INTAKE,	0505A	52.43	41.94	
1	0	51-11-8-054-187 ADAPTER UNDERHOOD S	0506A	22.35	17.88	
1	0	51-11-8-054-261 TRIM COVER, GRILL,	0506A	17.95	14.36	
1	0	51-11-8-054-262 TRIM COVER, GRILL,	0506A	17.95	14.36	
1	0	51-11-8-054-155 GRILL, BUMPER, FRON	0508A	21.98	17.58	
1	0	51-11-8-054-156 GRILL, BUMPER, FRON	0508A	21.98	17.58	
1	0	51-11-8-054-163 SUPPORT LEFT	0508A	20.07	16.06	
1	0	51-11-8-054-164 SUPPORT RIGHT	0508A	20.07	16.06	
1	0	51-11-8-055-826 TRIM COVER, BUMPER,	BC003	650.00	496.77	
Received by:						
						SUBTOTAL

Add this part to the list: part# 51118054188

Bumper is painted.

Lip/splitter – if you want to install it too. I got it from a member on this forum

Additional expanding plastic rivets – I got a bag of 15 from ebay

¼" aluminum rivets – get it from the dealer (part# 07147234212). You need at least 4.



Tools check: basic mechanic tools, rivet gun or rivet plier to handle ¼" rivet. I got one that looks like a lock cutter from a specialty shop. Rivet air gun if you want, but can run you upwards of \$250

A few screws and bolts: "the kit" does not come with bolts and screws to finish the job. I had to pick up 2 M6 sized bolts, about 3 inches long to secure the lower bumper metal piece. 4 screws to secure the fog lamp. Additional screws to secure the lip.

REMOVAL

Not going into details here, like safety measures, and what size sockets/screw drivers to use. Right side is passenger side, Left side is driver side

1. Jack up the car and remove the 2 front wheels
2. Remove under car dust shield, handful of screws from this
3. Remove all screws and rivets from underneath bumper





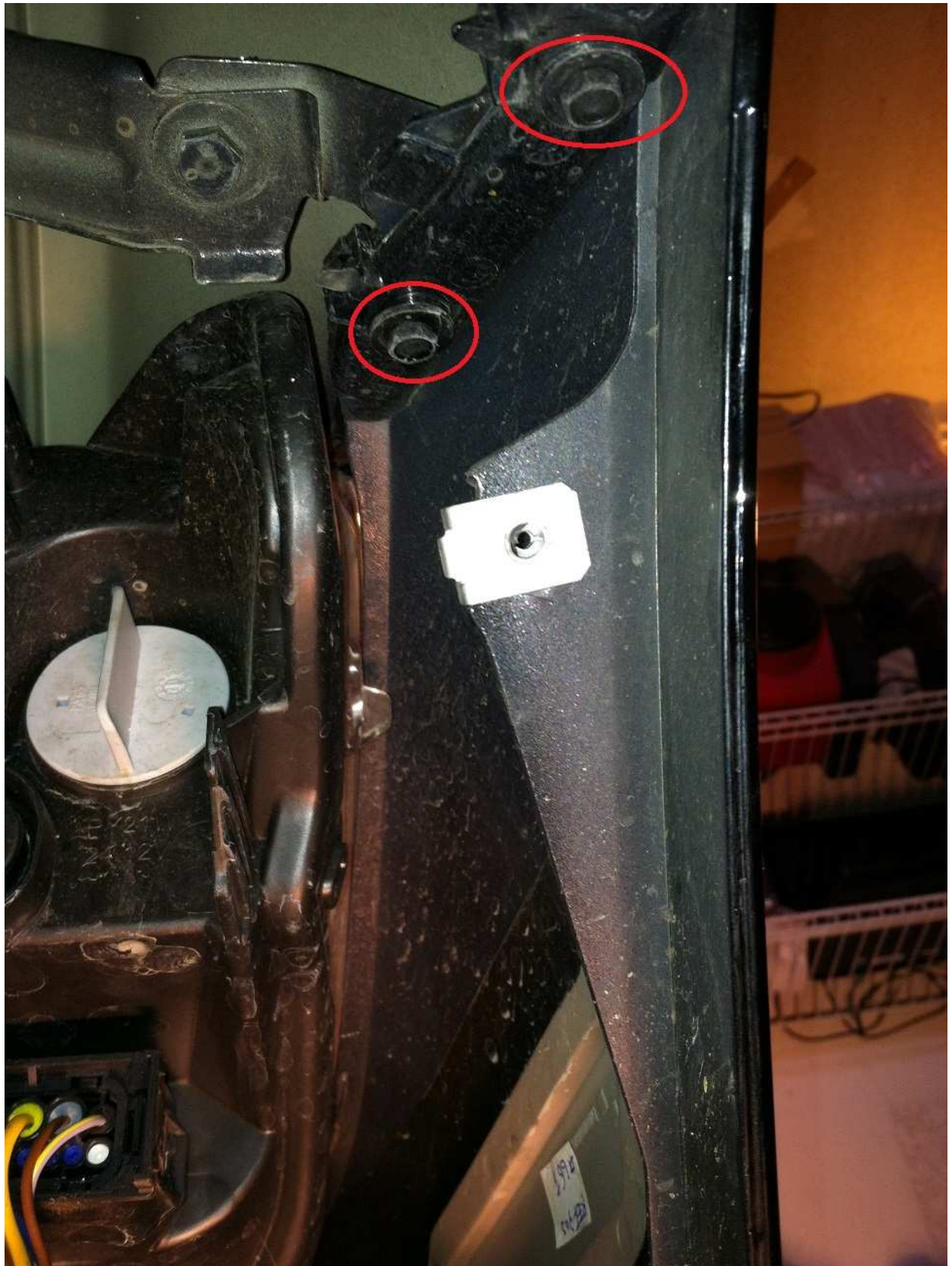


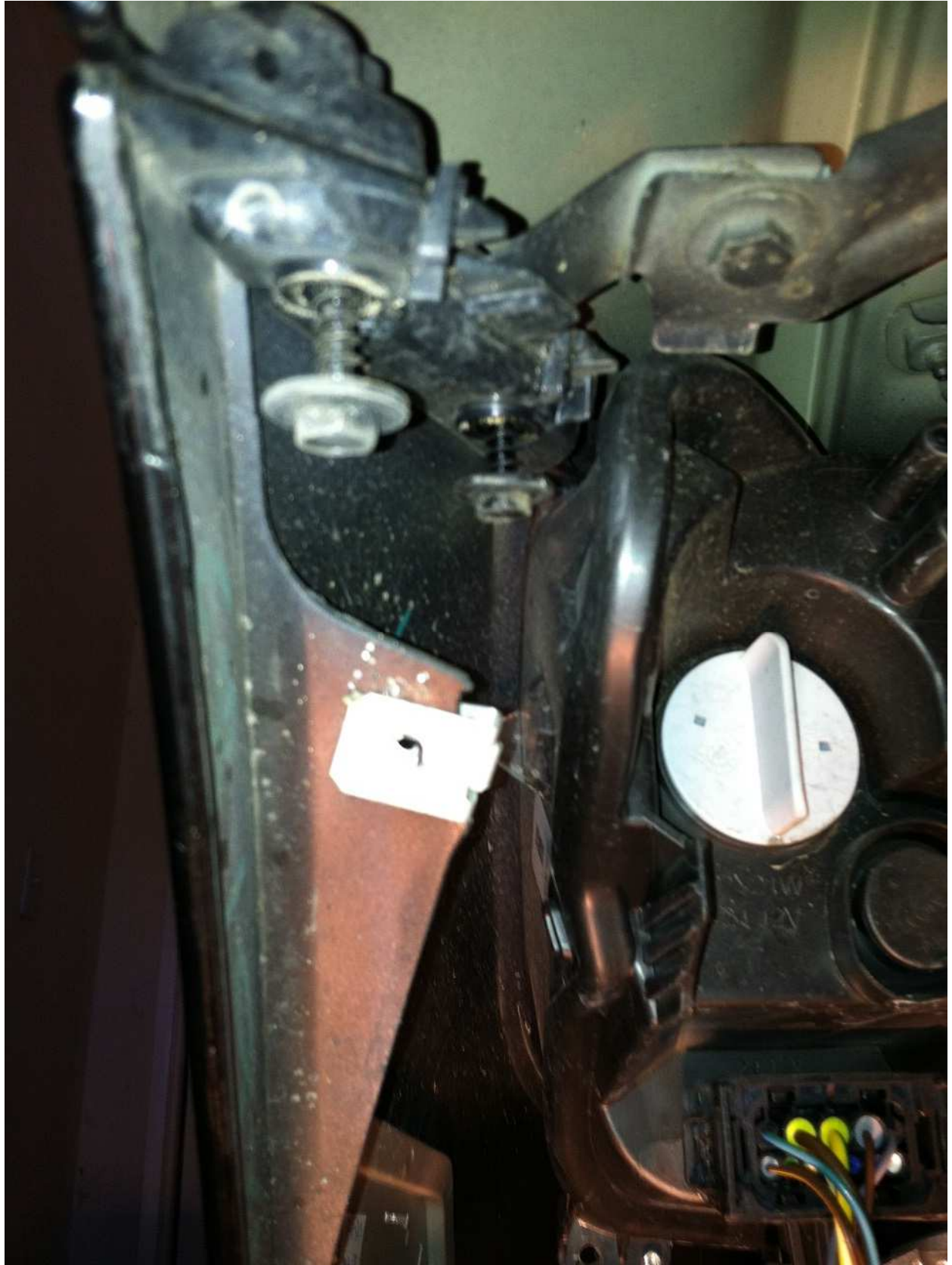


4. Remove dust guard from both wheel well, there are more screws towards the back and top. Picture only shows front 4

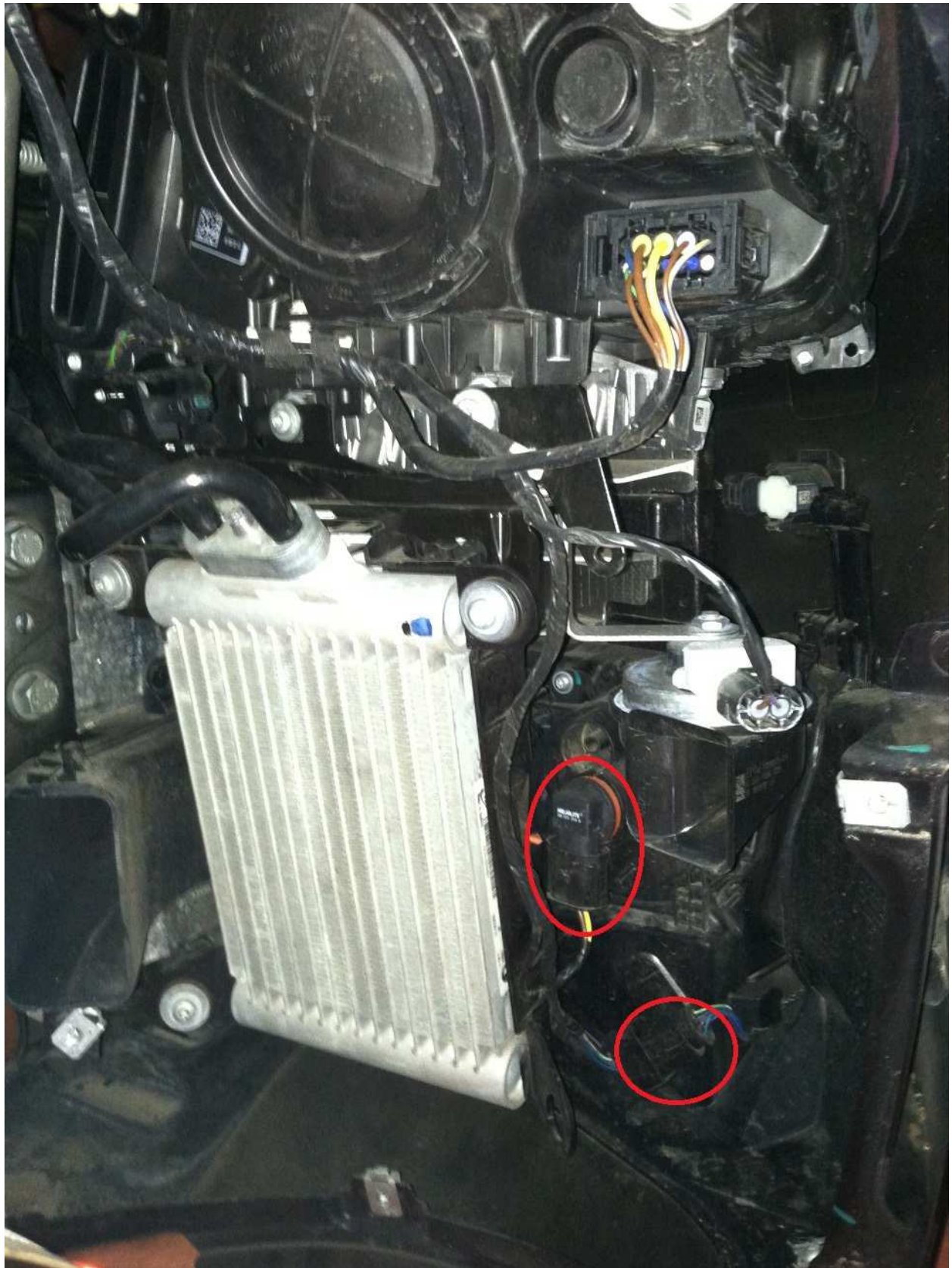


5. Remove 2 top screws inside wheel well, they hold up the top corners L/R of the bumper. Left and right wheel well.





6. After wheel well guard is removed, items are exposed that you can unplug. Right side, unplug fog lamp and parking assistance sensor



7. After wheel well guard is removed, items are exposed that you can unplug. Left side, unplug fog lamp and sensor



8. Pop the hood, and remove the rubber lining



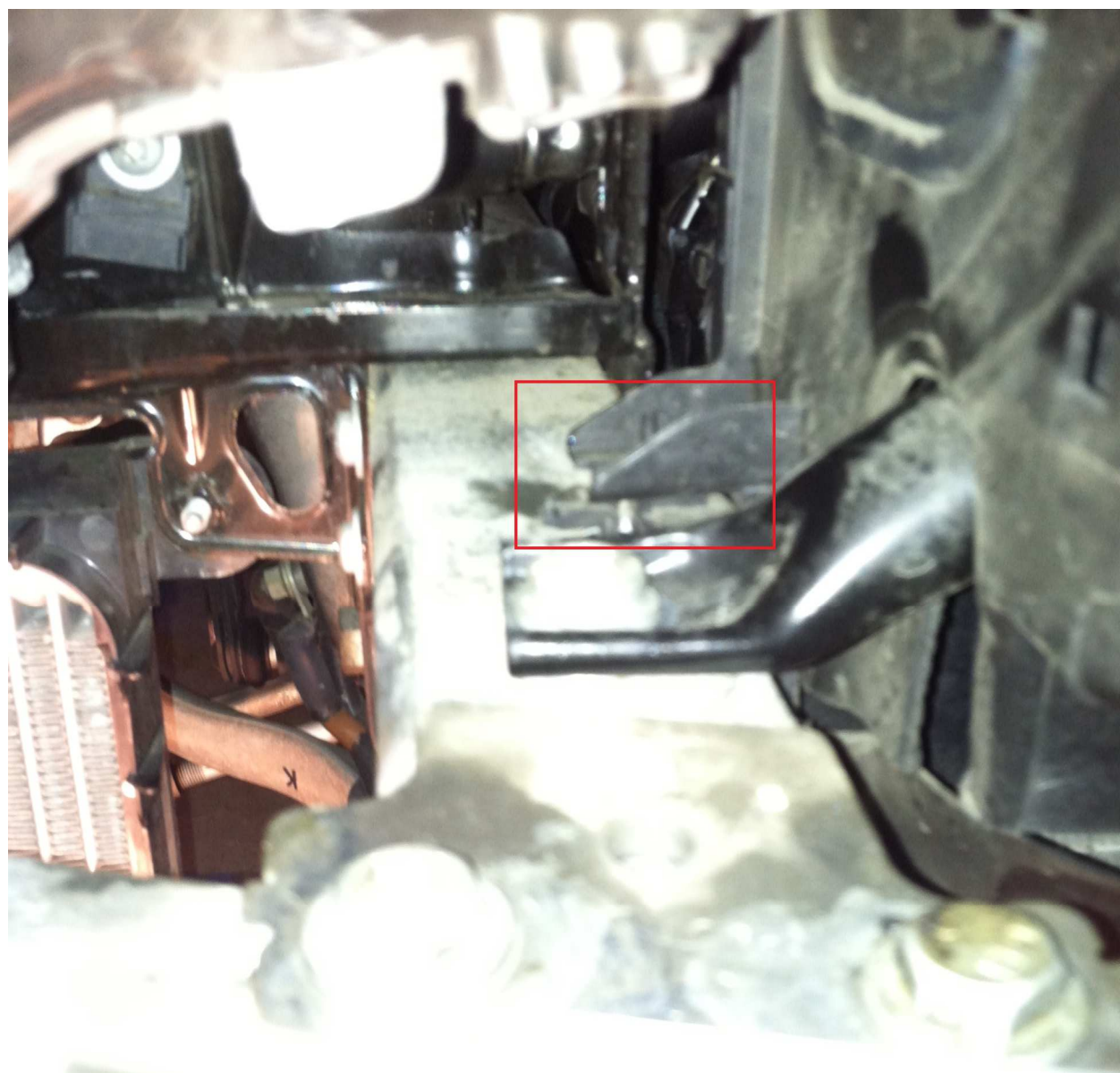
9. Remove 4 bolts above the bumper, remove 2 "black" screws above headlamp – they also held the bumper in place



10. From the top, peel the bumper out. From the sides, pull loose the bumper. From the middle and bottom – pull loose the bumper. Wiggle it if you have to. DO NOT force anything! Lay it on the side for now.
11. Remove shock absorber piece (part# 51118054186) by sliding it left and gently lift out. If you force it, you will break off the 2 tabs. It is very brittle.

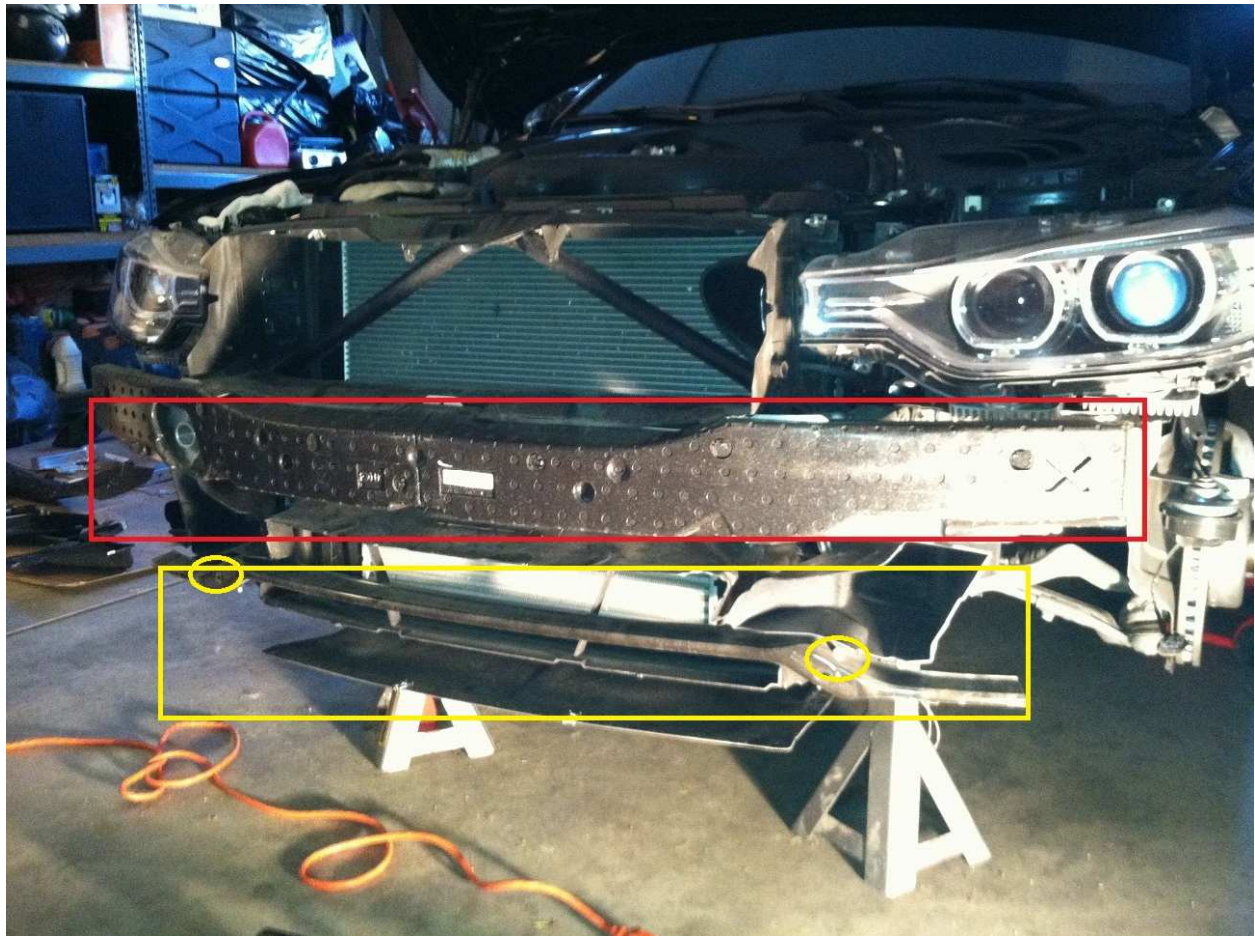


12. Remove radiator shroud (part# 51747255414) by lifting it off the two hooks on the side. If you force these, you will break them off. It is very brittle.





13. Remove the lower bumper metal bar (part# 51647266325), it is held together by 1 M6 bolt on each side. You will not reuse this part or the 2 bolts. Yellow highlight.



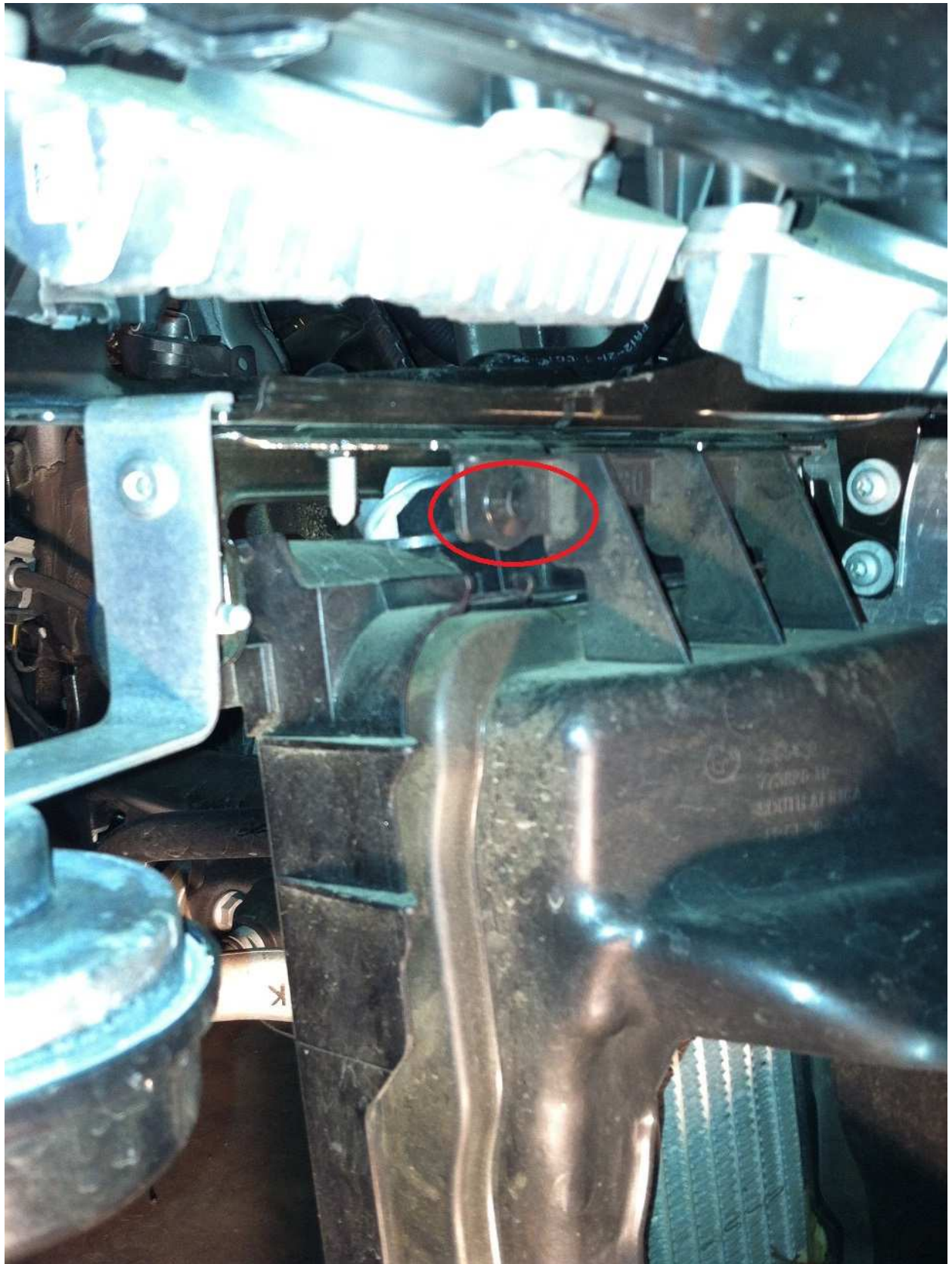
14. Remove the upper bumper (large aluminum bar, part# 511172553930), it is held together by 2 pairs of bolts on each side. You will reuse all parts. Behind this bar, are two plastic rivets holding the rubber piece, pop them out.







15. Right side, remove the shroud (part# 51748055061) covering the aux cooler radiator. It is held together by 1 top plastic rivet and 1 bottom plastic rivet. Slide the piece slightly to the left to free it from the top-right-corner lock.



16. Right side, remove the brake duct (part# 51747255418). It is held together by 1 top rivet and 1 bottom rivet



17. Left side, remove the brake duct (part# 51747255417). It is held together by 1 top rive and 1 bottom rivet

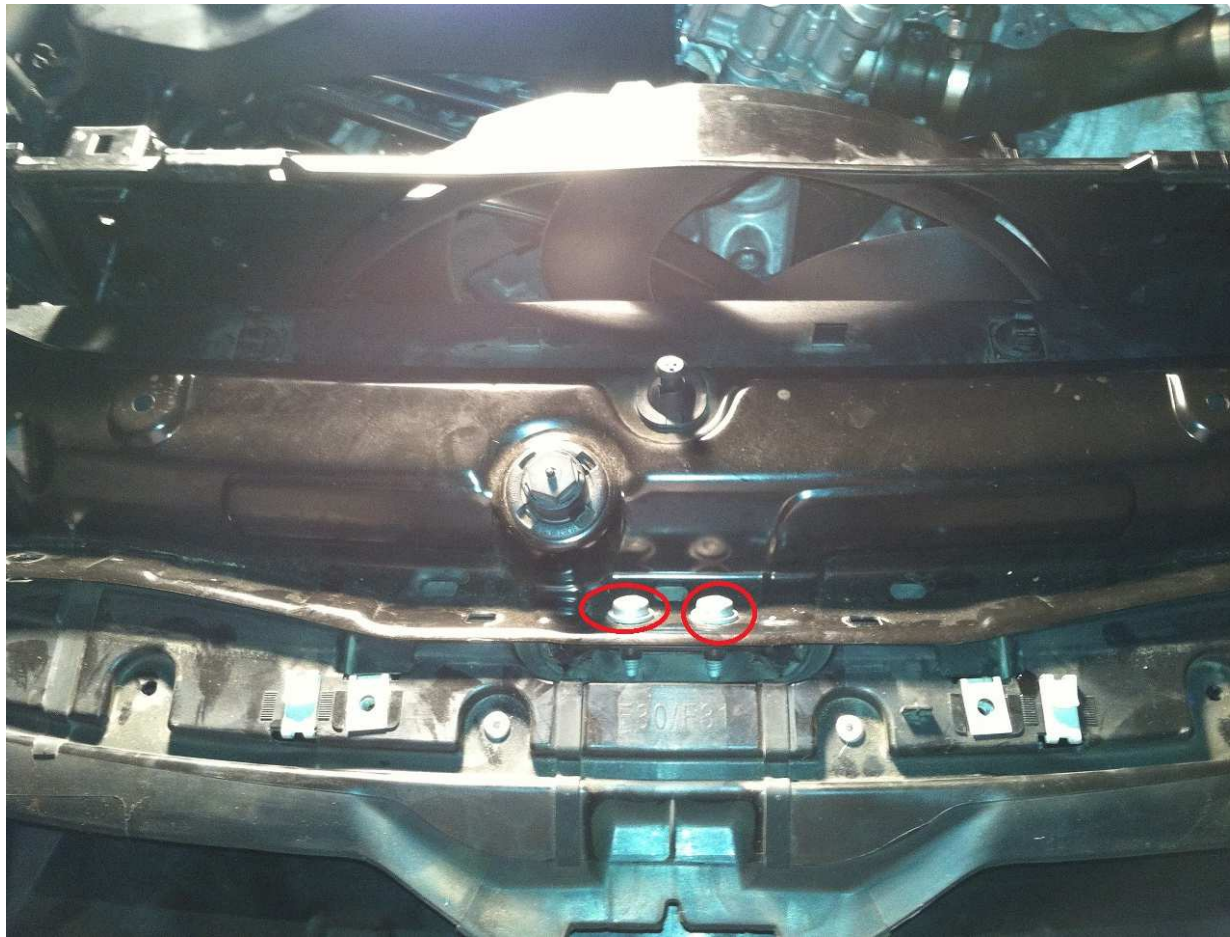


18. Right side, remove deformation element (part# 51117266194). It is held together by 1 bolt attached from the aux radiator bracket, 1 bolt thru the end of its body, 2 torx bolts above. If you look at the picture, the torx bolt on the outside is simple enough to remove, but the inside bolt will be a challenge. This is where the job becomes difficult. If you can figure out a way to remove this bolt easily – without taking out additional parts mention below, please let me know.
- a. Back under the hood. Remove the air intake – filter housing and duct
 - b. Back under the hood. Remove the radiator fan. It is held together by top left corner screw, middle right side screw that is also holding another item. Unplug the fan. There is a clip on the right side of the fan that you need to press to free it. Carefully pull the fan assembly up. You may also need to unplug the top right radiator hose to give more room to pull the fan up. Use a plier to pull up the clip to unlock, and just pull out the hose. When you do this, she will bleed blue liquid. I lifted the hose higher to prevent back drip. I also plugged the radiator opening with some plastic and rubber bands. You have more room now to get to that screw. Be very careful not to damage the radiator fins. I used a thin board placed against the radiator to protect it while I work.
 - i. You *may still* have difficulty getting a straight reach to the bolt. This is due to the radiator hose connection at the bottom. If you don't then by all means, remove the bolt and move onto step 19.



- ii. To allow more wiggle room to get to the bolts, remove top metal cover above the bumper. It is held together by a handful of torx bolts. See picture. These bolts, if taken out, will need to be retighten later with Loctite solution.







- iii. Remove top plastic radiator cover. It is held together by top left and right corner screws
- iv. Now you are able to “lift” the radiator up past the bolt to reach in and unscrew.
- v. Do the same for the left side bolt that is holding the left side deformation element.
- c. Remove inside bolt holding right deformation element (part# 51117266194)



- d. Remove inside bolt holding left side deformation element (part# 51117266193)





19. Left side, remove deformation element. It is held together by 1 bolt thru the end of its body (yellow in picture), 2 torx bolts above. You may have removed the inside torx bolt from previous steps.





20. AT THIS POINT, YOU HAVE REMOVED ALL ITEMS NEEDED TO BE SWAPPED.

21. Examine the right deformation element. It has a metal bracket attached (part# 51647266324), that was used to hold the aux radiator in place and it is also attached to the “curb descent damper” rubber piece (part# 51117268479). You have two choices here: 1) Order new metal bracket and new damper piece and attach them to the new deformation element with the blind rivets or 2) Drill out the rivets on the old deformation element and reuse the damper piece and bracket. I would do #2, since I will never go back to the old sportsline bumper anyway. Drilling out the rivets takes all but 30 seconds for each. Attach the rubber piece and metal bracket the same way on the new deformation element – using the aluminum blind rivets. Use the rivet gun or rivet plier to do this job, it is the only way!



22. Examine the left deformation element. It is only attached to the “curb descent damper”. Follow either technique used in step 21 to install the rubber piece to the m-sport deformation element.

23. BUMPER ITEMS TRANSFER

- a. Install the lower bumper grill (part# 51118054136) into the m-bumper. It should snap into place with a gentle push



- b. Install the fog lamp grills (part# 51118054155, 51118054156) into the m-bumper. They should snap into place with a gentle push



- c. Remove the top 2 grills from the sportline bumper by pinching each individual clip and pushing outward. Install them into the m-bumper.
- d. Install "bumper support" assembly (part# 51118054163, 51118054164) into the m-bumper. There is a left and right unit from the retrofit kit. The edge should line up with the holes on the bumper. Secure the assembly by the two screws (kit doesn't provide this, get them from your hardware store) and 1 rubber rivet. It is also being held in place by the clip nuts, which you will relocate from the old bumper.



- e. Relocate the 6 clip nuts from sporline-bumper to m-bumper; there should be 3 from each side. Use a needle nose plier to pull off the clip. Install them in the approximate same places.
- f. Relocate bumper mount support piece (part# 5111296331,511172963080 from sportsline bumper to m-bumper. Gently pry out and install, it should snap into place on the new bumper.



- g. Examine the sportsline bumper. If you have parking assistance sensors, see how they are attached and the cable being ran. Remove and relocate them to the new bumper. Lightly pull the clips back and pop them out. The parking assistance wire terminates on the right side of the bumper, the plug is held in place by a pushed-in clip. Pry it out and relocate the whole unit. Install the parking assistance sensors on the m-bumper using the same wire management like the old bumper. EVERYTHING should fit into place.









- h. Examine the sportsline bumper. If you have fog lamps, remove them by two screws. Relocate and install into m-bumper in the approximate same place. There is only one way each will fit. If you don't have fog lamps, the kit should have shipped with just the grills.
 - i. If you have lamp washing assembly – you're on your own. Relocate them.
24. THAT IS IT FOR BUMPER ITEMS TRANSFER AND NEW PARTS INSTALL

RE-INSTALLATION

Last out – first in. Follow this order to make the reinstallation easier.

25. Install the two deformation elements. Remember, the right one has the additional metal bracket for the aux radiator. Left one only has the rubber piece. Also remember that each element is held in place by a bolt thru its backside and two torx bolts in the upper "ears". Be careful, not to over torque (I don't have torque values), these are aluminum and easily strip. The right element also secures the aux radiator with a bolt.



26. I would tackle the hard pieces back under the hood now...re-secure the radiator if you have loosen them. Remember, put back the top plastic piece.
27. Drop the radiator fan assembly back into place. Make sure it locks into place, you should hear a click. Any component you loosen to free up room, should be re-secured. Be very careful not to damage the radiator fins. I used a thin board placed against the radiator to protect it while I work.
28. Re-secure the radiator hose. Don't forget to push down the locking clip.
29. Put back the air intake hose, and housing. Tighten up the clamps
30. If you have removed the top radiator plastic cover and also the metal plate, re-install them now.
31. Done under the hood. Back to front bumper. Install the brake ducts (part# 51748054229, 51748054230). There is a right and left unit. Each held together by two plastic rivets
32. Install the aux radiator shroud (part# 51748054232). There is an m-sport version – do not reuse the old one. It is held together by two rivets
33. Install the turbo radiator shroud (part# 51748054228). Remember, two flimsy/brittle clips at the top. Do not be forceful – they will break off. Make sure the edge flaps fit snugly in the crevices
34. Install the large aluminum bumper bar (part#51117255393). Held together by a pair of bolts on each side.
35. Install the lower bar (part# 51118054188), it connects underneath and between the two deformation elements. The kit doesn't provide them. Order them from BMW for 85 bucks. Held together by an M6 bolt on each side. The old bolts aren't long enough so cannot be reused. The kit doesn't provide these 2 bolts, order them or get them from your hardware store.

36. Install bumper shock absorber piece (part#51118054186). Slide it in from “your left side” facing the car.



37. Underneath the car, install the dust shield. Secure it 3/4 way with screws. Let it hang down for now.
38. Install the deflector lip (part# 51718055019, 51718055020) to the dust shield, using the screws. There should be a left and right piece from the kit. The old left deflector lip may have a sensor on it, but notice that the m-sport lip does not have an opening. I drilled a hole on mine and relocated the sensor in the approximate location and orientation.
39. You are ready to mount the bumper! Help should be requested here. It should “fit like a glove”. DO NOT force anything. I would loosely secure two top screws to prevent it from slipping off and taking a scratch. You know it fits into place when the top corners lined up to the wheel well. Secure the corners with two screws on each side. Secure all the top screws “loosely”. You will need to adjust the bumper after all pieces are in.
40. Left wheel well, plug in the fog lamp and sensor cable
41. Right wheel well, plug in the fog lamp and parking sensor cable
42. Install the left wheel well dust cover to the left deflector lip and the bumper, secure it with all the screws. Make sure the holes closely lined up by adjusting the bumper if you have to. Make sure the brake duct pushed thru.
43. Install the right wheel well dust cover to the right deflector lip and the bumper, secure it with all the screws. Make sure the brake duct pushed thru.

44. I would close the hood to see any adjustment to be made with the bumper. Nudge the bumper in some to close the gap with the hood. Tighten all the bolts now. Put back the rubber liner covering the bolts.





45. Back underneath the bumper, bend the dust cover and slide it in above the bumper line.
46. Install the “under hood shield” piece (part# 51118054187) between the dust cover and the bumper. Make sure the holes lined up. Should fit only one logical way. Secure all screws and plastic rivets.
47. Secure any screws not installed on the underneath dust shield. There should not be any screw left on the floor (except for the 2 bolts from the lower metal bumper piece that was not used). I was able to re-use all screws.

48. LIP / SPLITTER INSTALL

- a. The inside piece should line up with most of the holes on the bumper. The 2 outer most holes on each side – you can push 2 rivets in to hold it in place.
- b. The center is still hanging loose, find the center of the bumper and mark the area on the bumper where the two holes on the piece are. Drill two holes and secure with screws. The piece is now sitting tight. You can secure more screws if you like. You are ready to snap in the outer piece
- c. Wipe clean all dirt and grease on all the parts
- d. Expose the double-side tapes on both pieces
- e. Carefully push in the larger piece. DO not press down until all areas “snapped” in. One way to check is, the holes should lined up with the bumper holes. Should fit very snug.
- f. Press down now so the tape can adhere
- g. Push in rivets where the holes lined up with the bumper.

- h. If your car bled blue liquid when you removed the radiator hose, refill with BMW coolant. 50% coolant and 50% distilled water. Follow this procedure to purge air from coolant:

Connect a battery charger to the battery or jumper cable ports under the hood.

Turn ignition to the ON position. If equipped with a START button, push button (with key fob installed or active), but do not depress the brake or clutch pedals. This will turn the ignition on, but not crank the starter.

Set heater temp to MAX and blower to low speed.

Press the accelerator pedal to the floor for 10 seconds.

The self-bleeding procedure will begin (via the electric water pump) and will run for about 12 minutes. During this time the water pump will alternately turn on and off. Do not remove cap while bleeding procedure is running.

When bleeding is complete, double check coolant level and adjust as required. Replace coolant cap. You are good to go.

49. Go back and check all bolts, screws, pieces. No loose items.

50. YOU ARE DONE!!! STEP BACK AND MARVEL AT THE FRUIT OF YOUR LABOUR.

