



Free Flow Exhaust Installation Instructions

PART NUMBER: D660-0035 (polished tips) or
D660-0035-BLK (black ceramic tips)

APPLICATION: 2010-11 X5-M & X6-M

Parts List

1	D663-0159 (-BLK, for black tips) X5 Exhaust Assy
1	D663-0127 Hardware Kit, Includes:
2	18 30 7 560 781 Coupler Clamps
2	D671-0335 Aluminum plugs
2	D502121 5" Wire-ties
1	M6 NYLOK M6 Nylok Nut
1	M6X12 M6x12 Bolt

Thank you for purchasing a Dinan High Performance Exhaust! Some mechanical skill and special tools are required to install this exhaust. If you are not familiar with this procedure, we strongly recommend that you arrange for a qualified BMW repair facility to perform this installation.

Required tools:

Sawzall type reciprocating saw with blades suitable for cutting stainless tubing (24 teeth per inch preferred, 18 TPI, OK)

Disc sander for sanding the cut exhaust tubing

Remove the Stock Muffler

1. Disconnect the vacuum hoses from the throttle actuators on the muffler. **Attn!: You will plug and relocate these hoses in a later step. Failure to plug the hoses will cause a fault due to the loss of source vacuum if the car is driven. The wastegates, which are controlled by the same vacuum pump, will be inoperative in this condition and boost cannot be achieved. Don't skip this important step!**
2. The stock muffler can easily be removed from the car without removing the bumper skin. You should remove the cover shown below. Remove the three screws and withdraw the cover.
3. Under the cover you will find three more screws that secure the painted bumper skin to the hard plastic bumper structure. Remove these three screws. Pull the bumper skin out a little to make sure it is free. You will need to carefully sneak the stock exhaust out from this painted cover in a later step. If for any reason you feel you cannot remove the stock exhaust system without damaging the bumper skin then go ahead and remove the bumper skin.



4. Disconnect the grounding strap(s) from the muffler, noting how it is installed.

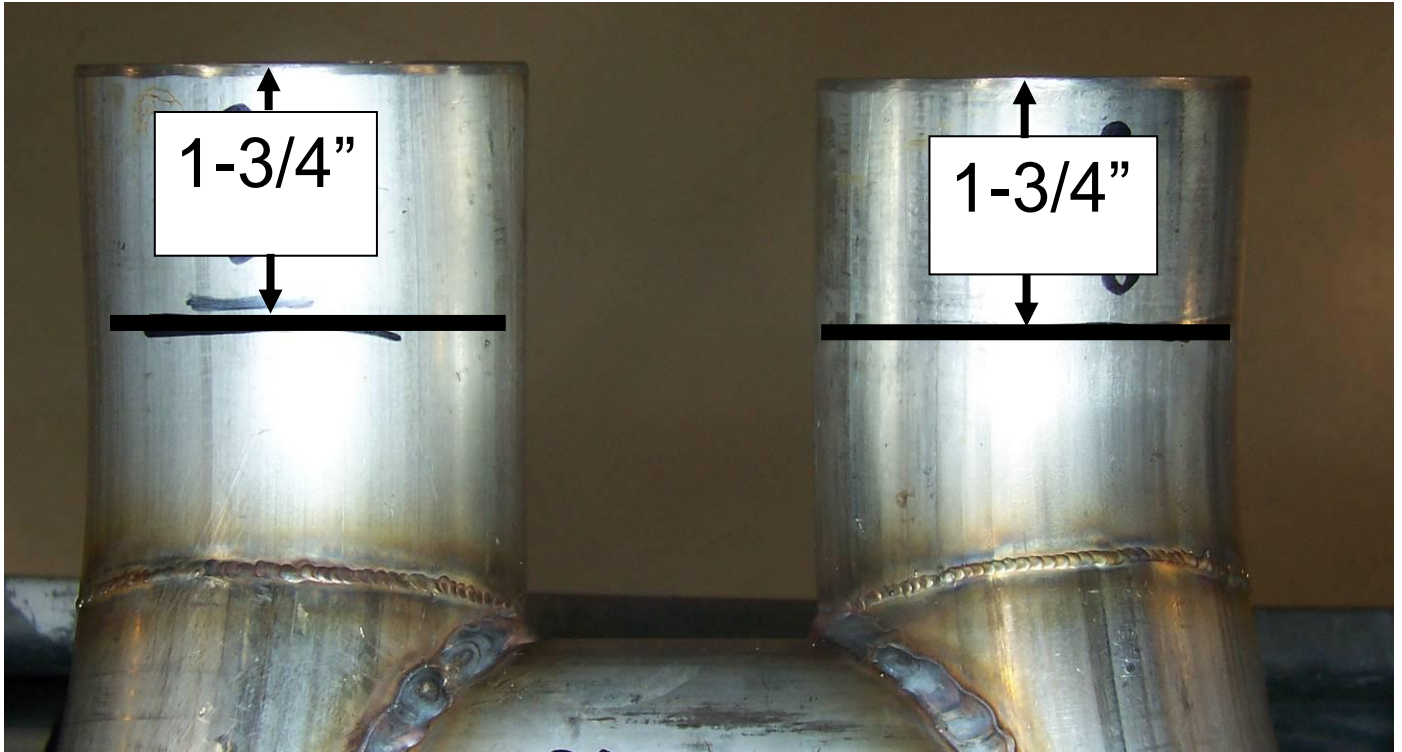
5. The marking and cutting of these tubes that go into the muffler is very critical! Do not rush this procedure. When done correctly the muffler will fit properly. If you cut too much off or leave too much length there may be fitment and sealing issues later. Carefully mark the muffler inlet tubes in front of the welds as shown. This must be where the tubes are straight and not on the flared section. The “stagger” cut of the tips is very important so **double check to make sure you do not get them marked reversed as to left and right.**



6. **Check to see if there is sufficient room above the places to be cut to make sure that the blade will not contact the bottom of the car on its long stroke. If additional space is needed (most likely) continue with this step.** Place “screw-jacks” on the muffler at both ends. Unbolt the two muffler hangers from the car. Then lower the muffler enough (about 1”-2”) so that the saw blade will not hit the bottom of the car on its long stroke. If needed, disconnect the middle exhaust hangers. You may want to wire tie the outlet tubes of the muffler securely to the car so it does not fall when you cut through the last tube. The jacks must still be in place. I always add a third screw jack under at least one tailpipe. Read the following two steps before cutting.

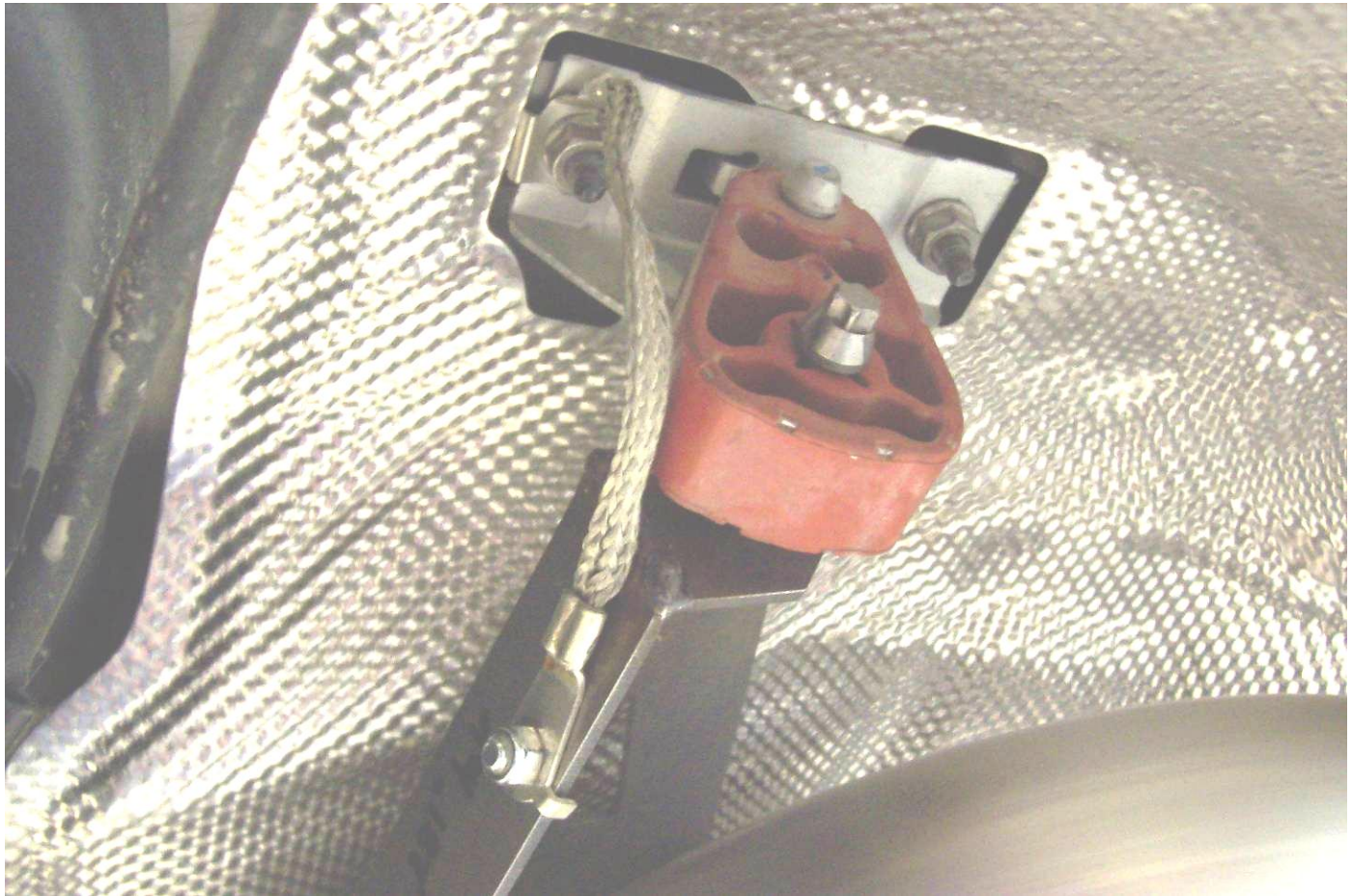
7. Place another jack under the inlet tubes to support them when the muffler is cut off if you did disconnect the middle hangers. **Be very careful when you get to the point where the muffler is finally separated from the inlet tubes so it does not fall and injure you.**
8. Make the cuts very carefully stopping now and then to observe the “straightness” and “squareness” of your cut. Try to run the blade speed slower than full speed as the stainless steel is very tough on saw blades, especially when run too fast. Run the blade as slow as you can without the tube bouncing is the general rule for stainless cutting. You may want to stuff a 2x4 piece of wood between the exhaust and the floor of the car if bouncing is a problem. Squirt a little cutting oil on the blade and in the slot for easier cutting and longer blade life. Achieving good square ended cuts is critical in fitment and sealing of the exhaust.
9. Carefully remove the stock muffler from the car. This is really best done with two people.
10. Use a disc sander or similar tool to clean up the cut ends of the stock exhaust and take down the high spots and sharp areas.
11. Use a large diameter die grinding bit or half-round file to deburr the inside of the cut tubes and to give a nice chamfer on the outside of the tubes to aid the installation of the coupler clamps. **Be sure to remove all burrs from the outer edges as one high spot can not only cause a leak, but also cause misalignment of the entire muffler.**
12. Make sure the middle exhaust hangers are reconnected if they were removed.
13. Look at the exhaust tip openings on the car and you will notice one area on both sides that slightly protrudes into the space that is needed for the larger Dinan tips. There is a hard plastic bulge in the bumper structure covered by some soft aluminum texturized sheet metal. Gently tap the sheeting with a mallet or even your thumb till it stays tight against the plastic bulge. This should allow ample space for the larger tips.
14. Set the two mufflers side by side and swap the rubber hangers onto the Dinan exhaust. Use the two hairpin clips to secure the hangers.

15. Use a felt tip marker to mark all four tubes 1-3/4" from the end of each tube (the two you cut and sanded, and the two on our muffler). Be sure to mark the **bottom side of the muffler inlet tubes** so you can see them from below when the muffler is in place. This will help you center the two coupler clamps during installation. See below. Note: generic photo.



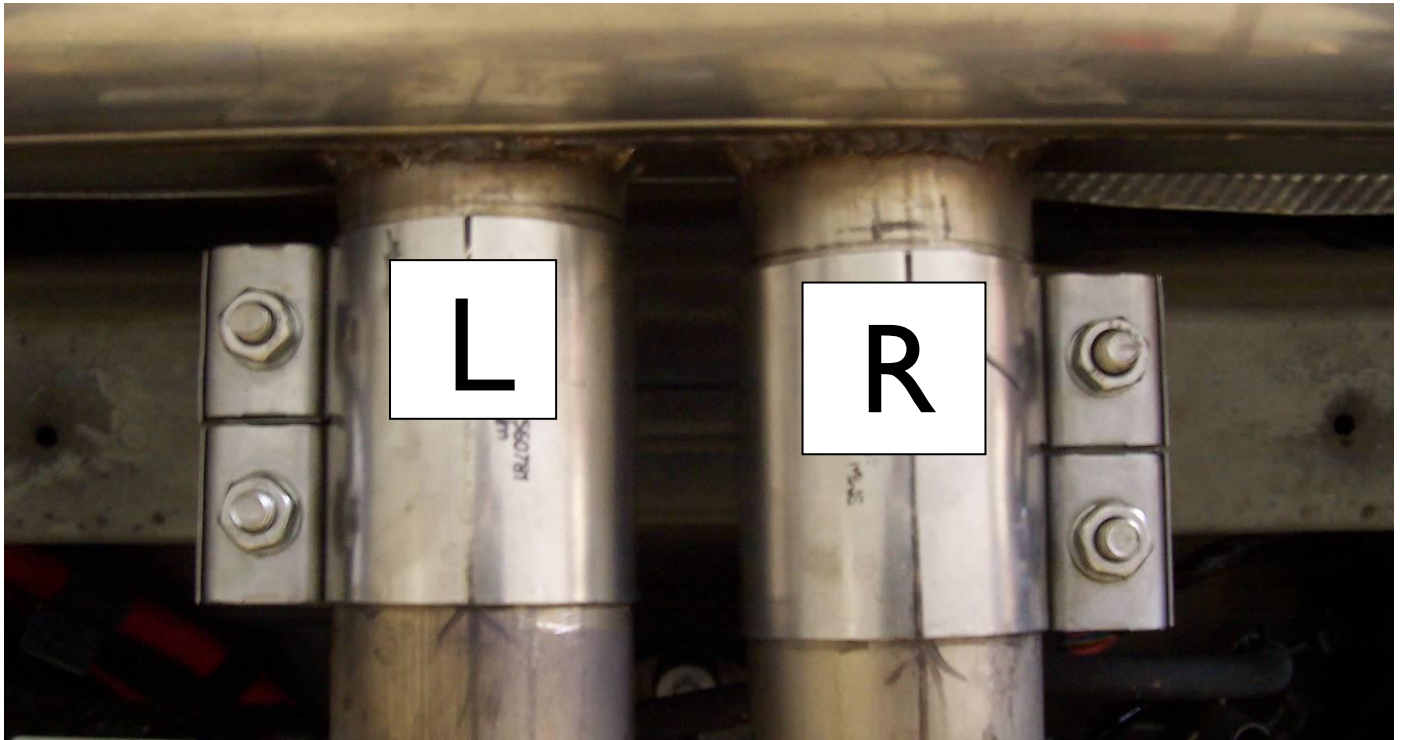
16. Locate the two Coupler Clamps. Remove the nuts from the clamps and apply some antiseize compound to the threads and under the nuts, otherwise the nuts will bind and not tighten properly.
17. Slide the coupler clamps onto the cut tubes on car with the nuts to the outside and facing down. The couplers should be fairly loose so installation is easy.

18. The next step should be done by two people. Guide the inlet tubes on the Dinan exhaust into the clamps. The spacing between the tubes may not be exactly the same so you may need to squeeze the two stock tubes together to get them in.
19. Slip the stands under the muffler.
20. When you get both tubes fully into the couplers you can reinstall the two exhaust hangers while installing the ground strap. Use M6x12 bolt and M6 nylok nut to secure the ground strap to the muffler. Make sure the strap has some slack for movement. See below.



21. Remove the jacks from under the Dinan muffler.
22. **Please read the entire step before tightening the coupler nuts!** Center up the clamps between your lines, then SLOWLY begin tightening the clamps as you “position” the muffler. The clamps are somewhat “self-forming” if you just tighten them in the wrong position they will tend to always return to that position. Push directly up and down on both of the exhaust tips evenly as you gradually tighten to get proper alignment. The tips should be evenly centered in the openings. The tips should be no closer than about ½” from any chassis component. **Check to see that the left side tips are level with the right side before you fully tighten the clamp nuts.** The torque for the clamp nuts is 33 ft-lbs.

23. Mark the couplers with an R and an L using a permanent marker or sharp scribe so they can be removed and reinstalled in the same position in case the muffler needs to be removed later.



24. Plug the two vacuum hoses using the two aluminum plugs from the kit. Wire-tie the hoses to the existing cable or wires, out of the way of any moving items.

25. Remove the protective tip covers if you have not already done so.

26. Reinstall the three bumper skin screws and the cover.

27. Take the car out for vigorous test drive for several minutes to help burn off the insulation netting. Then bring the car back to the shop backing off the throttle the last few minutes, and let it smoke for a while OUTSIDE. This is common practice (out-gassing) for any new exhaust product. It is also wise to retorque the coupler clamp nuts after they have been heat cycled at least one time. This is a good practice with most clamps found on all cars. **Please wait for the exhaust to cool down before retorquing or you will damage the threads of the clamp assemblies.** Although retightening the clamps improves sealing and security, it is not mandatory.

Enjoy your new Dinan Exhaust!