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Do you have a 2001-02 BMW Z3 3.0i Roadster with the Harman Kardon speakers?

Is your 6" subwoofer badly cracked along the outer membrane of the woofer cone? So bad that pieces of it are flaking off?

Have you tried looking for an OEM (as I did) that was inexpensive or in good shape?

Have you tried finding a 6" aftermarket sub that matched the impedance and had dual voice coils?

Do you want a nice fix for the sub, so you don't have to replace the stock BMW amps (ultimately leading to replacing most of the speakers?)

Have you aged yourself by 10 years looking for a cheap repair that solves this problem?

Well, cousin; I've got a tasty solution that costs \$3.99 (plus the grifting in your respective state known as "Sales Tax" unless you live in Delaware). Sound too good to be true? Well, guess again, compadre. Buckle up, and hold on for the feel-good thrill ride of the summer.

1. Remove the subwoofer box from the car.

This is achieved by GENTLY wedging the panel located between the rollbars. Start in the front, and get the front edge popped up. Next, go to the back of the top panel, and GENTLY wedge the back of the top panel up. The back is ultra-brittle; if you do this too hard, you will break one of the receptacles that the panel tab slides into.

Next, use a phillips screwdriver, and unscrew four screws located at each corner of the subwoofer. This is obvious, as they are on the top.

Carefully lift the subwoofer box straight up, as it will still be connected with a translucent white connector. When the box is extracted, disconnect the sub wire from the connector.

Congratulations, Bob! You've removed the weakest link in the

Harman Kardon system! Feels good, right? Next; let's remove the woofer from the box!

2. Removing the woofer from the box.

Okay, so on each "corner" of the speaker, there is another screw; four in total. You will need a "star bit" screwdriver to remove these. Simply remove four screws, and SAVE THEM!

Next, don't get all "Mister Grubby Thumbs" on the speaker by yanking it out. This is delicate surgery, you caveman. Carefully, wiggle the speaker, as there is a gasket located between the speaker ring frame, and the box. If it does not budge, curse at it, then get a razor blade and gently wedge it in between the box and the speaker ring frame. You may feel like it, but don't cut your wrists. You'll die, and the project will not get completed.

3. Disconnect the speaker terminals.

You will notice that this subwoofer has dual voice coils. This means twice the fun in unhooking the wires from the speaker terminals. Each wire lead has a little tab on it. Push the terminal lead tab inward whilst (yes, I said "whilst") pulling the tab away from the speaker terminal. It is a good idea to mark which wires are which. Below is a photo showing "DG" for dark green and "LG" for light green. Looking back, I could have just said "green", as there are two different sizes...you can't screw that up, right? The other side will have a black and red wire. Disconnect those the same way.

NEXT: Let's fix this bitch; the \$3.99 way!



4. Clean out the dry rotted membrane.

My subwoofer had dry rot around the membrane of the subwoofer cone. It was so dry, that...okay...I don't have a joke here. Moving on...

So, clean out the flaky, dry remnants of a speaker that was once mediocre. Do this well, as it will pay dividends in the result. Next, flip the speaker over, and begin packing the space between the coil and the cone with strips of cloth or paper towels. The idea is to push the subwoofer up, as it normally would have sat, if BMW wouldn't have used a trunk speaker for convertibles that get UV and moisture exposure.

Here's an old chestnut for you to munch on. Pack the material a little bit at a time, then turn the speaker over, and lightly press the cone down toward the coil. If you hear a "tap" or "click", that is not normal, genius. Use more material to pack behind the parts of the cone that "tap" or "click". Keep it up!, but be sure to not pack too much in; eyeball where you think the speaker should be sitting from the front.

Below is a photo showing the packing of the sub.

NEXT: Pack the speaker!



5. Backing the Batting Out

So, you keep packing the underside of the sub until you don't get any more "taps" or "clicks" when you press down on the cone. Now, you are saying to yourself, "Great, Z3PO; now what?" Well, here's where it gets more interesting.

Turn the speaker, so the cone is up (magnet side down). Check to see if there is excess cloth or paper towels pushing up beyond the edge of the speaker ring frame. Using white or light colored material for packing will help tremendously. If you see the material protruding, use a flathead screwdriver to carefully wedge it back down a bit. Do this all the way around the speaker. **THIS IS KEY!** The image below shows this.

Next, try lightly pressing on the cone to see if you get any more "tap" or "click" noises. If so, try bolstering more packing material behind the sub. There is no science to this, people..it is trial and error all the way, however...you need to make sure that (a) the material is not protruding, and (b) that the cone is not making those noises when you press it down.

NEXT: Repair the membrane! HUZAZH!



6. The Good Stuff.

Take some time to visit a hardware store. I chose Lowe's. They dominate my burb. Get yourself some hella-awesome GE Brand Premium Waterproof Silicone for Window/Door/Attic/Basement. I used the 3-hour rain-ready variety. This stuff is sun, freeze, water, shrink and crack proof. In addition, it is flexible (important for a vibrating speaker), and PERMANENT! Below is a photo for reference. It cures to the touch in 3 hours. I let it fully cure for the entire 24 hour period. I'm getting excited, and when I get excited, I get ahead of myself. Let's continue.

I bought this small tube for \$3.99. You simply snip the tip (your opportunity to play "moil" here) and squeeze. I snipped it on the second line. You'll want to do this, as there will be a sizeable amount you will need to fill.

NEXT: The Big Squeeze!



7. Give it some caulk (note the spelling; aurally, it may be offensive).

Run a bead of caulk down into the gap all along the inner speaker frame ring. When you have done that, run a second layer over the top of that. It is important to note that wet silicone caulk does not adhere to dry silicone caulk. Do the second bead immediately! The photo below shows the awesomeness in which I apply my caulk.

When you have done that, lightly run your finger around the caulk, and smooth it. DO NOT PRESS HARD! By lightly running your finger over the second layer, you will get that caulk pressed down deep enough. Be sure to get a skim coating of the silicone caulk on the remaining membrane, so it attaches the speaker to the caulking.

NEXT: The finale!



8. The cure is the cure.

Below is the photo of the finished product! Be sure to keep the speaker at room temperature for 24 hours. The beauty is that there is no odor to the caulk, so you could leave it indoors without killing the family with fumes.

Notice how I spread the silicone caulk so it liberally covered the remaining membrane? Good! This is very important, as it bonds the speaker to the caulk.

LET IT CURE FOR 24 HOURS! I almost tried it after 3 hours, because the packaging for the silicone said it's waterproof in that amount of time. DON'T! Let it fully cure for 24 hours; like a nice ham.

Reinstall the sub in reverse order from the first post, and let the mediocre bass hit your ears. You won't get the most awesome sound, but it works like original (I compared with existing subs) and it keeps

the car OEM with the stock HK components.

The best part, is that you won't need to spend \$700 on a replacement sub from BMW or an aftermarket that has the form and fit and costs \$500-\$700.

I'll update this if I have any issues with the repair, but be assured that I have had the bass at full, and cranked Rammstein and Shiny Toy Guns on the CD player with no pops, rattles, or other problems.

Questions? Comments? Need a pal? Post on here, and I'll reply.

Thanks, everyone!

