

THE SPEAKER EXCHANGE®

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Recone Instructions

These instructions are generic to most brands. Certain recone kits will come with the voice coil already attached to spider. Some come as a voice coil/spider/cone assembly. There may be modifications required for specific driver models and brands.

It is important to read the complete instructions before starting repair.

Remove speaker parts:

Use a utility knife and cut the cone and spider (slicing through the pigtails- also known as lead wire or braided wire) near the speaker frame. Remove recone kit assembly. **Immediately cover voice coil gap with masking tape.** Use utility knife to clean remaining spider from frame. Remove gaskets. They can be reused if new matching gaskets are not available. Clean remaining glue, surround, and gasket debris from frame. De-solder pigtail leads and clean terminal.

Install Voice-Coil Assembly:

Clean all debris from inside speaker frame and magnet. Use compressed air (if available) to blow debris from speaker and eventually from voice coil gap. Add another layer of masking tape over the first to trap any remaining debris. Remove both layers of masking tape from voice coil gap at one time. Inspect the voice-coil gap. Clean gap thoroughly by folding masking tape over shim so sticky side is exposed on both sides. Insert into gap and circle. Repeat with new tape continually until tape comes up clean. If the original vc coil was burnt, check for windings in gap.

Fit all parts together in frame to check fit before using any adhesives!

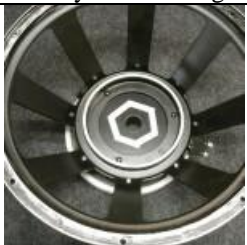
Install the voice coil into gap using different size shims until you get a tight fit where the coil won't move easily. You must be able to insert a thin shim into the gap around the outside of the windings. Inspect to see that vc is set evenly. You should be able to see an even amount of the windings from all sides. Height of coil is determined by travel of the cone and length of former and windings. Inspect original parts for a guideline. A general rule of thumb is to set the coil so that the distance from the bottom of the shims matches the length of windings. Ideally, the top two windings of the vc windings should be visible above the top plate of the magnet. This is not true for all speakers. Pull shim(s) and voice coil out and compare distance to bottom of magnet. If large travel cone, then set voice coil higher. Remember that if you set it too low, the coil will "bottom out". If you set it too high, the coil will cause over excursion and can get damaged or bent. Remember to install so voice coil leads align with terminal on frame. Gently place the leads over top of shim so they will not be in the way of spider and cone.

Fit spider over voice coil and lower to frame. Turn gently to insure spider is sitting evenly. If flat spider, remove and apply a neat bead of contact glue on frame where spider will attach. Attach spider (gently turn to insure proper setting) and press ends to frame in full circle to insure glue attaches to outside of the spider fully. If cup spider, set spider and then add adhesive to end where it attaches to cone.

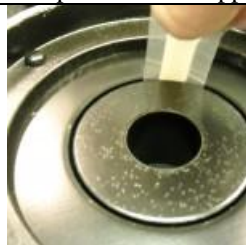
Fit cone over voice coil. If opening is slightly too small, gently open with the back of your thumb nail. If it is much too small, then outline correct size and open with a straight edge razor blade and then smooth with thumb nail. See if cone throat opening reaches spider. If the cone does not reach the spider, epoxy voice coil to spider and then install cone as detailed next. If cone reaches mouth of spider at voice coil, then remove cone, add glue to the outside frame and install cone. Line up with voice coil leads and terminal. Smooth cone edge into glue. Install gaskets. Use a small piece of masking tape to hold in place. Use epoxy to attach cone to coil making sure that epoxy reaches spider completely. You might need to slightly lift and lower cone so epoxy forms bead around ID of spider. Smooth epoxy where it meets vc with solder poker or other thin tool.

Turn speaker upside down (careful to not let gaskets move) so epoxy cannot drip into the vc gap and leave 24 hours. If the foam or rubber edge is taller than the gaskets, you must use a spacer so the surround is not crushed when the speaker is turned upside down. The next day, gently lift voice coil leads and remove shim. Make holes in cone for pigtails if no eyelet exists. Install pigtails through cone if not already in place. Wrap vc leads around pigtails and solder. Solder pigtails to terminal on frame leaving "arches" that allow cone to have full range of excursion (be careful not to make arch too long or too short). Make sure leads face outward from one another so they cannot short out. Clip excess lead wire from outside of terminal.

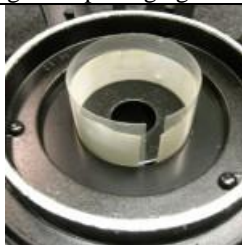
Hold speaker facing down (so debris cannot fall into vc gap) and test speaker. If noisy, try to clean inside the voice coil gap by gently inserting masking tape inside the vc former with sticky side out. Circle and remove any excess debris. Glue voice coil lead to cone eyelet. Install glue on dustcap and attach. Apply edge dampening agent if needed.



Cleaned basket ready for repair



Clean voice coil gap



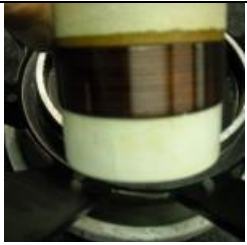
Put shims in gap



Put voice coil over shims in gap



VC should fit snugly in gap w a few windings showing



Usually winding width is a close match to bottom of former width



Dry fit spider onto voice coil. Turn to level.



Apply glue to spider or frame where spider lip sits



Press down evenly



Dry fit cone



Gently open mouth of cone if hard to fit over voice coil



Apply glue to frame where cone will sit



Use side of glue tip to spread glue evenly



Install cone



Press down evenly on all sides



Apply glue to gasket. use side of tube to spread



Install gaskets and masking tape in place



Dispense two part epoxy onto dry surface.



Mix with poker or toothpick



Spread epoxy where voice coil and cone meet



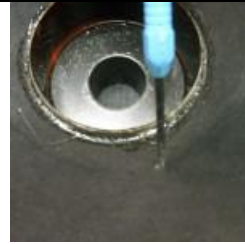
Spread epoxy evenly where spider meets cone



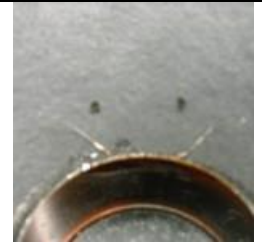
Turn upside down and let rest overnight



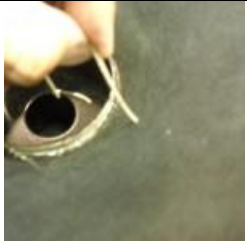
When dry, remove masking tape



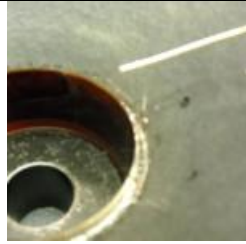
Make holes for pigtail leads if needed



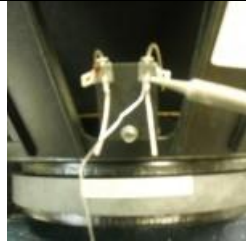
Holes in cone should be approx 1" above vc leads



Install pigtail leads



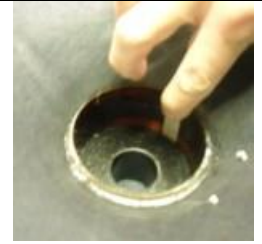
Press into curve and up cone. Wrap at pigtail



Leave an arch, solder and cut lead



Glue leads to cone



Clean inside gap w tape if buzzing



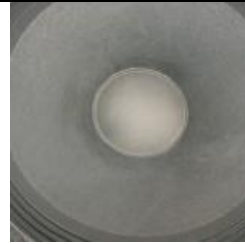
Spread glue on dustcap



Center cap on cone



Apply latex if cloth is untreated. Let dry.



Congrats. You're done

