EMISSION LABS

TUBE BASE REPAIR GLUE

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Description

If you ever tried to glue a loose tube base, you probably found it does not hold for a long time. That is because almost no commercial glue will stick to hot glass for a long time. A risk you may not be aware of, is two components glue in many cases breaks the glass after a longer time. That is because old glass after longer pressure at the same point, will develop a crack. This is why historic glue becomes flexible when hot, and adapts to the glass shape. That is the magic of this old glue. Unfortunately when cold, it becomes brittle, and may become loose over time. Mainly caused by pulling the tubes out, by the glass. The glue we offer, contains original, historical tube base glue. We have found a way to modify it, so it can be used at home, to attach a loose tube base. It is flexible, and can be used, when there is still some part of the original glue inside. The original glue will be partially solved and build a strong compound with the new glue.

It will have a surprisingly good result, and requires no cleaning of the surfaces to be glued. Any residue can be removed easily as long as the glue is still wet. The glue is grey, and will solve in water. Once dried, this glue will not solve any more, and gets transparent with a tea colour. So it is not visible afterwards, and the optical result is very nice.

This glue has fine mineral particles mixed in it, and is a relatively thin kind of glue. It penetrates the gap, while the mineral parts act as filler. It will attach sockets where the original glue is still in place, just loose from the glass. It can not be used when the original glue was removed.

Instructions before use:

1. Read these two pages to the end ☺
2. With many tubes, the printing on the glass wipes off easily, which reduces the collector's value. Very likely you will damage the original printing with fingerprints, without protection for it. To prevent this, put a small plastic bag over the glass, and tape this at the glass bottom. It is little work to prepare the tube like this, and you save the valuable printing.
3. Get some strong elastic rubbers before you start. You will need those during the process.
4. Mix the glue very good, until it becomes smooth. The glue has mineral particles which sink at the bottom, and it must be re mixed before you start. Shake the bottle is not enough. Use a screw driver or a chop stick to mix it well.
5. Inside the bottle is a small brush. With the brush, apply the glue between the base and the glass, all around the base. It is important not to use an excessive amount of glue.
6. After the glue is applied, hold the tube horizontal and gently rotate the base back and forth against the glass, with many small movements, and use no force. This will somewhat solve the original glue and the new glue will slowly creep inside the gap while doing so. If the base is still reasonably tight, keep on moving it gently, after some 30 seconds the old glue will weaken a little bit, the gap becomes then wider, the glue will get absorbed better. Use no force while rotating the base, because otherwise the original glue breaks off. So use time instead of force. This will often glue the tube base initially.
7. If the glue was completely absorbed quickly, you can repeat the above step once, but don't try to put as much glue inside the base as possible.
8. Wipe off excessive glue, small remains can be removed later.
9. Put the elastic rubbers on the tube, so the base will pressed to the glass. Some glue might be pressed out.
10. Clean the base with a cloth and a few drops of water on the cloth.
11. In this condition, rotate and adjust the base in the original position.
12. Let the tube dry. Use the upside down position, so no glue will leak inside the base, causing electric problems later. It is useful to use an old jar or a drinking glass for that.
13. After 10 minutes check if some glue has dripped out, and remove this when needed. Now finally clean the tube. Later, a small film of glue can be removed easily, but dried drops are harder to remove.
14. → READ AT NEXT PAGE →

15. The drying time is two weeks. (Sorry!) During this time the tube must be upside down, to prevent tube glue internally leaking on the electrical wires. Don't try after one day if the base is already fixed, because it will look like that, but inside the glue is still weak, and will break off when you try. So don't do this.
16. Don't put heavy force on the tube in the beginning, as the hardening will continue for some more time.
17. Important for good result is that most of the original glue is still there. When the tube base will break off again, don't be disappointed. This happens often, when too much original glue was gone, or when the gap inside was full of dust and dirt. If the base becomes loose again, the glue now has now removed the dirt layer off the glass, which is good! In this case simply repeat the repair, and often the second try or third try it will be successful. Take small amounts of glue.
18. After a tube base repair, the tube must be tested, for short-circuits or leakage. This is to make sure no glue has dripped inside the tube base. Only if it passes this test, it can be used safely.
19. If there is leakage, let the tube run on heater voltage only, for 24 hours. This will generally remove any moisture inside the the socket.

If the socket absorbs very much glue: It should be avoided that glue leaks inside, and makes a "drip" connection between two pins inside. This can cause grid current, and damage the tube. For this reason, the tube is ideally kept upside down, most of the time, and always upside down when drying. In case the tube keeps absorbing more than 10…15 full brushes of glue, do not apply more glue, but let it dry the normal way for 14 days. There is probably still an air gap now, and the base may get loose again. If so, just repeat the process, or repeat even twice, and then it will have filled the gap.

At first use: With most tube bases, the remaining solvent vapour of the glue can not easily escape. That is why 14 days drying time before first use is needed.

To prevent the base to break off: Never pull out a tube by the glass. Only pull by the base.

STORAGE: The dark blue glass bottle stops UV light, and storage time is indefinite, as long as it is not stored below -5 °C. This means it should not be shipped in cold winter time. When the glue is ready to use, it is a milky fluid. Non-solvable particles are mixed with the glue, which collects at the bottom, and also the fluid separates. So at first sight the glue may look too old, but this is not so. Before use, mix the glue, until it gets smooth, and it looks like honey. The inside brush is not suited for mixing. This needs a screw driver or a chop stick. In case the bottle was opened many times, and it seems a bit dried up, you can make it smooth again by adding a few drops of fluid, until it is similar like honey again. This fluid is water with 10% alcohol added.

Clean the bottle after use:

This glue becomes very strong if dried for some weeks. It attaches really good to glass. So if the cap is smeared with too much glue, you will **NOT** be able to open the glass bottle later. So wipe off any drips off, with a wet cloth, before you close the bottle.

Disclaimer

Here is the legal stuff: Use an eye protection. Don't swallow this glue. Keep it away from children. This glue may only be used by a qualified Radio & TV technician. Don't use it for any other purpose or in any other way as indicated above. We are not responsible for damage resulting directly or indirectly from the use of this glue. After a tube base repair, the tube must be tested, using a calibrated tube tester to make sure all functions are normal, and no short-circuits or leakage current may be present. Only when the tube passes this test, it can be used safely. If you disagree with this, don't use this glue.