

# Technical Reference

## Alternatives to Engine Turners Cement for sticking up

While Engine Turners Cement, the traditional material, has been used for generations for all sorts of work-holding scenarios, it is not always the best material.

A good example is the holding of thin sheets of metal. In the case of both large and small pieces, the tendency is for the work to peel away from the wax or just ping off.

### Double sided tape

For large pieces, double sided tape is often used. However: one must be very much aware of creep with such a method. Usually, it is prudent to provide a "stop" to prevent creep. This can be as simple as a couple of nails or pins in the board that the work is taped to. There are tapes that don't creep; even re-useable tapes for a limited number of times that release and stick with heat as the catalyst. New adhesives are constantly becoming available and talking to the suppliers is strongly recommended.

### The super-glue technique

For small pieces, such as watch dials and dial components, we use cyanoacrylate glue, a thin liquid variety, not the gel type. The piece is glued to a hardened steel plate or block which has been ground flat and cleaned and degreased with an acetone soaked tissue. The workpiece should also be cleaned if not having been protected by plastic film until just before use.

**Note:** Acetone is a solvent suitable for dissolving cyanoacrylate glue (super-glue). It can also be used to unstick your thumbs! And if you don't have any acetone to hand in an emergency, you will find that nail varnish remover usually contains acetone. Be aware that acetone is absorbed by skin and can render you illegal to drive.

On a piece about an inch or so square, one large drop in the middle is sufficient. The sheet is manually pressed down onto a steel block and slid around before the glue sets to spread the glue to the whole surface. It is essential that no air spaces exist under the workpiece. Practice will perfect the technique and acquaint the craftsman with the right amount of glue to cover the back of the job without sticking his thumbs to it! Excess glue pushed out from around the edges should be removed with soft, absorbent paper. A little acetone soaked into the paper is helpful but not essential. Soft toilet tissue is economical and effective.

To remove the work, it is heated until, for silver, it just begins to tarnish. The moment the tarnish begins to appear, a gentle push will release it.

**WARNING!** Be very careful not to breathe the fumes from the heated cyanoacrylate glue. These are visible as steam and also will make your eyes smart if allowed into contact. Ensure you have proper ventilation of the work area.

After the piece is released from the steel, move it somewhere safe and while the steel is still hot, use a flat scraper to carefully remove the remaining glue from the steel and then vigorously wipe it immediately with a clean acetone soaked tissue to clean it properly. Again, experience will be easily gained to perfect the technique of removing and cleaning. The workpiece will normally come away clean.

### Epoxy - possible but no longer practically workable

There was once a very good method of holding small pieces and then easily releasing them. The old form of Araldite, originally manufactured in the 1960s and probably even earlier, worked very well and was releasable with boiling water. The exact type, I believe, was AV/HV100, and the "Araldite Rapid" version of AV/HV100. Unfortunately, the brand has changed hands and the formula has been "improved" so that boiling water no longer releases it.