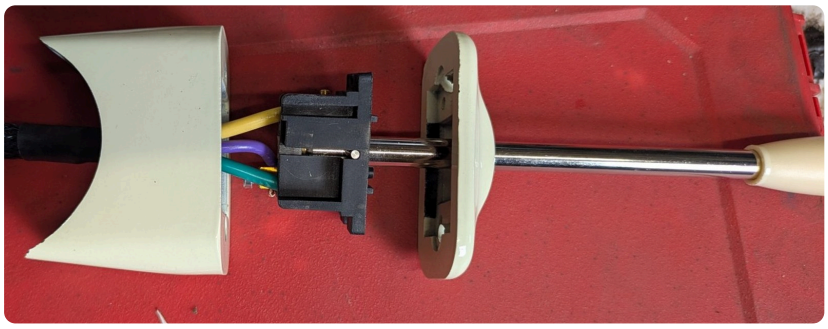
CASE STUDY · WORKING WITH GARAGES

Fitting a Land Rover indicator to a custom-build Gasser

> A custom car shop wanted an original Land Rover indicator and switch on a 2-inch steering column. Their sizing set the design direction, and 3D scans of the originals made it fit first time.

Custom builds rarely use parts the way their makers intended. This custom car shop was building a Gasser, a 1960s-style drag car, and wanted an original Land Rover indicator stalk and switch on its 2-inch (50.8 mm) steering column. The original mounting base is made for a smaller tube, so the shop needed a new mount that would take the indicator and switch unmodified and clamp firmly round the column.



The original Land Rover parts on the bench: mounting base (left), switch block and indicator stalk.

The challenge

The shop's own sizing let us agree the design direction quickly. A mount like this then has to be right to a fraction of a millimetre on several details at once, some hidden inside the parts:

- the indicator's outline and two screw holes, so it sits flush on top;
- the throat the switch drops into, and the ledge its latch tabs clip under;
- a clamp that grips the column firmly, and a way out for the switch cable.

Our approach

01 **Agree the direction.** We started from the shop's initial sizing to agree the overall size, shape and fixing with them, so the design direction was settled before any detail work.

02 **Refine it with 3D scans.** We 3D-scanned the original indicator top and mounting base and lined both scans up with the design. Scans capture what is hard to reach with a ruler, such as the depth and latch ridges of the switch throat inside the base. We matched the holder to them in professional CAD, down to 35 mm screw spacing and a mounting face within 0.1 mm.

03 **Make the clamp clamp.** A clamp bored to exactly 50.8 mm would close before it gripped. We added a 0.6 mm gap at the split, copied the original's cable notch, and thickened the strap under the bolt heads.

We use AI alongside our own engineering judgement to align the scans, measure the fit and check every change. It handles the slow number-crunching, so the whole redesign was done in a single session and you get your part sooner.



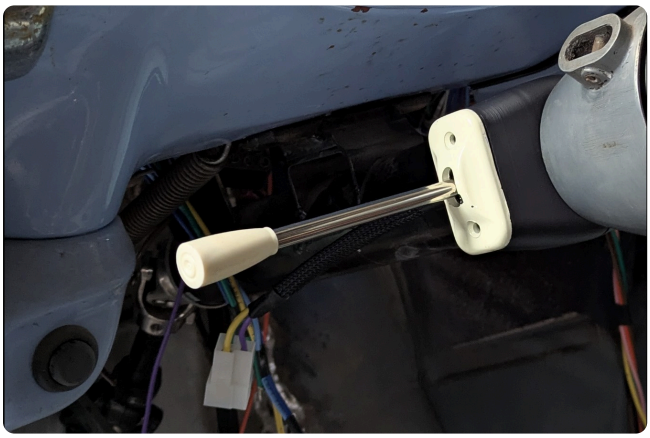
The two printed halves: the Top, with the switch throat and indicator screw holes, and the Clamp that bolts up under the column.

What the scans added

Initial sizing is ideal for agreeing a design; a scan adds the detail that makes it fit first time. Every change was checked against the scans, and the new switch throat matches the original base to within about 0.05 mm.

Both halves are printed in tough, UV-resistant ASA. Printing them on their sides didn't give a clean result once we added extra walls and infill for strength, so the Clamp prints on its flat base and the Top prints with the indicator mounting face down.

	INITIAL SIZING	SCAN-MATCHED DESIGN
Screw hole spacing	36.0 mm	35.0 mm, as scanned
Switch throat depth	3 mm	8.8 mm, as the original
Clamping gap	None	0.6 mm, adjustable
Material under clamp bolts	4 mm	6 mm



Test-fitted on the Gasser's 2-inch column, carrying the original Land Rover indicator stalk and switch. The car's interior is still unfinished.

The result

A two-piece holder, now test-fitted to the Gasser's 2-inch column, that takes the original indicator and switch without modification. Every key size is a named setting, so grip or nut fit can be tuned in seconds, and another can be printed on demand.

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