

Corvair 95: Stock was. . .

1 - Clutch Cable and Shift Stabilizers

By Steven Spilatro

This article originally was published in Corvan Antics Jan-Feb 2019 volume 47(1)

This is the first of a series of occasional articles on changes to Corvair 95 components during its short production life. As expected for a vehicle of “revolutionary” new design many alterations occurred during or after the first production year, but other modifications continued even into its truncated 1965 model year, sometimes strictly as cost-saving efforts. My main focus will be on design changes, rather than annual styling changes (such as changes in seat fabric, interior panels, and colors). As a start I’d like to review some early changes on the bottom side.

Streetwise only a few months in early 1961, the Corvair-95 needed its powertrain control system “tightened up” on several accounts. To reduce clutch chatter and slack, the clutch cable was shortened and its path across the undercarriage was redirected. The cable guide assembly (the metal bracket to which the cable mounts before its connection to the clutch rod) was also redesigned. The clutch cable casing was changed from nylon, which tended to absorb moisture, to Delrin which did not and afforded reduced friction.

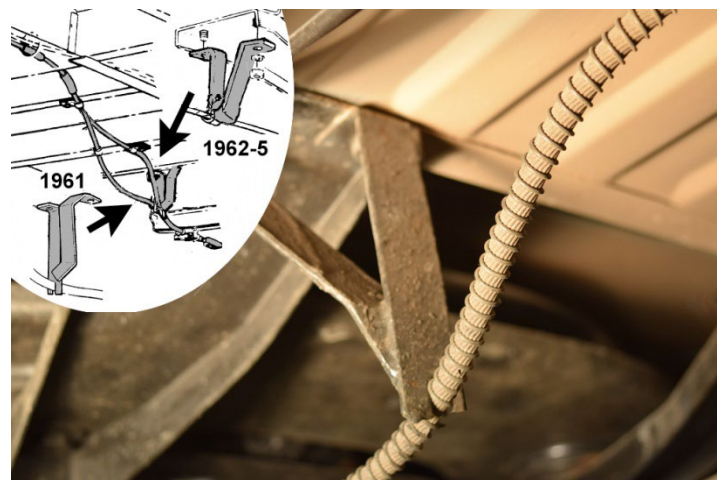


Figure 1. 1961 Clutch cable bracket

At some point all owners of early model FCs with standard transmissions must stare in amazement at the convoluted design of the shifter control, which negotiates a variety of pivots, couplings, brackets and boots on its way to the underside of the gas tank. While in the initial design the support bracket (# 3795730) on the lower side of the front cross member incorporated a brass bushing, this was eliminated (#3786168) mid 1961. In this highly exposed location the bearing was prone to fouling and, because the bottom angle of the crossmember was not adequately controlled, the bearing would sometimes bind.

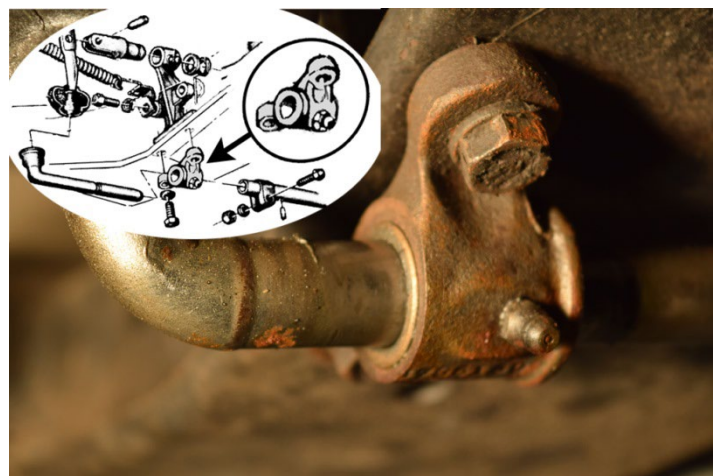


Figure 2. Early shifter support bracket with brass bushing and grease fitting.

The proclivity of the transmission to disengage while traveling over bumpy terrain had been dogging the engineering team for some time. Alex Mair described how early preproduction efforts focused on strengthening and cushioning the long control rod to reduce vibration. But when it was found that the problem consistently occurred at a rear wheel hop frequency of 12 cycles per second, corrective adjustments were made to the engine mounting system. Nevertheless, soon after release of the '61 FCs, customers began reporting that standard transmissions would disengage while driving over bumpy terrain. The problem stemmed from excessive movement of the powertrain through the rubber-cushioned transmission mounts. The engineering fixes were set forth in Technical Service Bulletin (TSB) DR-480 (May '61), although the descriptions therein are rather confusing.

The first design fix was addition of a stabilizing bracket (#3799222) to the rear crossmember against which a jamb bolt would apply 10-20 inch-pounds of pressure on the engine forward support. The assembly is shown in the engineering layout L58501, drawn between 1-5-61 and 1-9-61. This design is called the "production fix" in DR-480 and shown in the 1961-63 assembly manuals. But this design was deemed unsatisfactory because the jamb bolt would bounce against the engine mounting bracket creating unsettling noises.

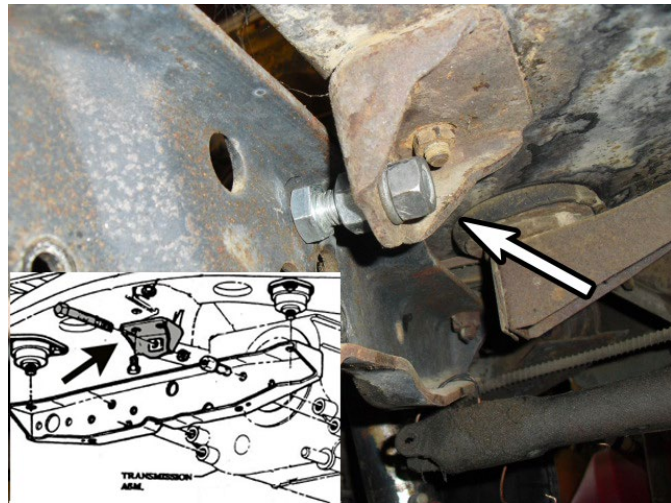


Figure 3. First design shift stabilizer with jamb bolt.

The final design fix was a rubber cushion (#377928, a motor mount dating back to the 1930s) and steel washers inserted in the gap between the rear crossmember support brackets and the front engine mount. According to DR-480, this is the repair to be made for FCs already on the road. Maybe this ultimately was determined to be the better solution and became the final production change, but never made it into the assembly manuals.

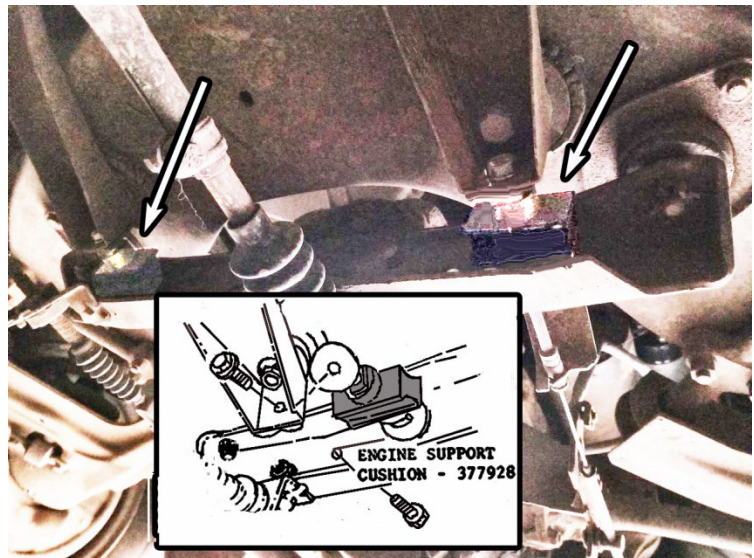


Figure 4. Second design shift stabilizer with rubber cushion.

As part of the redesign to prevent transmission disengagement, DR-480 refers to the addition of an overcenter spring on the forward end of the shifter control rod. Originally, the shifter rod had a spring pulling horizontally from a tab below the pivot bracket to the undercarriage sill. Although the initial engineering drawings lack this spring, it probably was added to provide return action for the shifter and is present in early 1960 FC builds.



Figure 5. Early design shifter stabilizing spring.

The overcenter spring described in DR-480 refers to a larger spring pulling on the shifter rod from a tab located above pivot bracket. This design is shown in engineering drawing dating to October – December 1960, and was continued until the introduction of the floor mounted shifter and linkage in 1963.

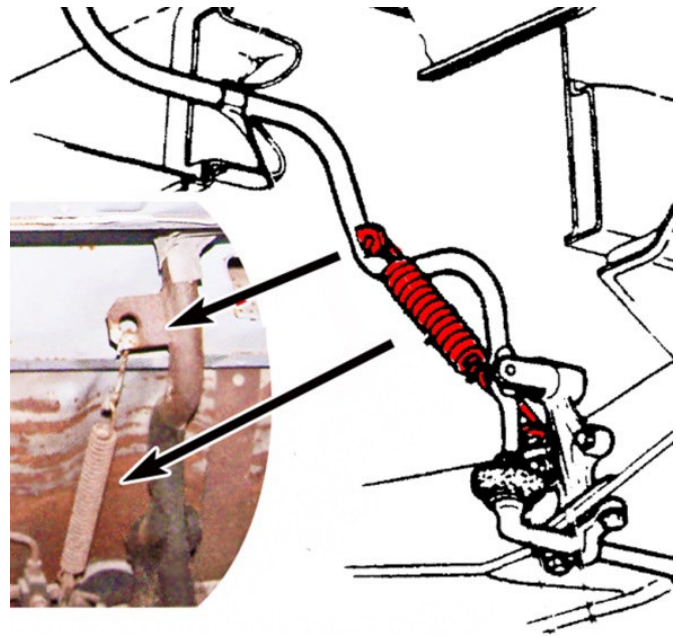


Figure 6. Later design shifter stabilizing spring.