

Corvair 95: Stock was. . .

3 - Rear Door

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The Stock Was series is exploring design modifications to our favorite vans and pickups. This third installment will look at modifications to the van rear door.

But first... a front door addendum

In the previous article I had discussed changes to the front doors. However, I missed another early '61 modification, deletion of the weatherstrip (#3778499) attached to the door itself. This is shown but not labeled on page 113 of the '61 assembly manual and noted as removed. Deletion, noted in the 1962 Truck Engineering Features booklet, was "a result of tests which indicate adequate door sealing is provided with the remaining door opening seal". But as already noted, apparently not, since it was necessary to add the short weatherstrip in 1963, as previously noted.

1961 removed weatherstrip

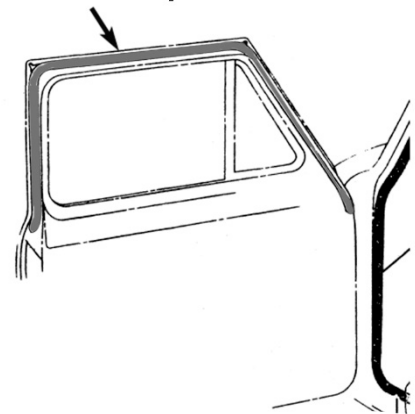


Fig 1. Front door weatherstrip

The Rear Door Bumper Conundrum

Why keep a bumper that gets no thump? That question has been much pondered by FC owners when looking at the "rear door outer bumpers" located on the rear corner body panels. The origin and history of these bumpers has been tied to that of the rear door hinges, which as originally designed allowed the doors to open far enough to hit the rear corners. But even after the door hinges were modified to limit the swing of the doors, the bumpers were still installed. This conundrum disappears if cushioning a door thump were not their sole purpose, which I believe is the case.

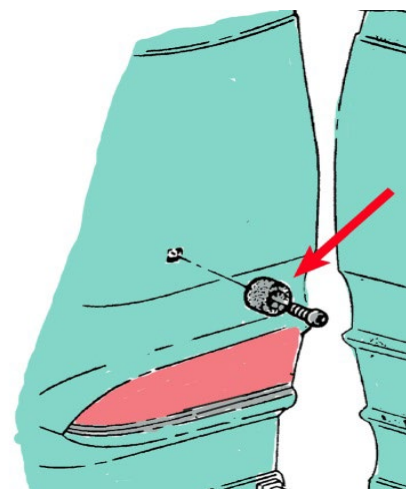


Fig 2. Location of rear door outer bumper

Let's first consider the problem involving the rear corners of the vans. As production of the FCs commenced in September 1960, the assembly lines reported that the rear corners of the vans were more frail and susceptible to damage than expected. The Flint and St Louis assembly line built the vans using body units preassembled at the Chevrolet Indianapolis plant, which included large side panel units with the rear corners attached. It would have been no small problem to have the corners of these large side units damaged during shipment or assembly. The assembly lines also found that the corners could be dented from a rear door, possibly caught by the wind, that vigorously swung open and hit the corner. These concerns would have extended to the vehicles after being sold and on the road.

From 1961 - '63 van rear doors used L & R hinges #3773775-6, easily identified by their three interlocking knuckles. Like the side cargo doors, the rear doors could open far enough to reach the body panels. To cushion the impact, "rear door outer bumpers" were placed on the rear corner body panels, but as mentioned these were not sufficient under some circumstances.

With production underway, a solution was needed quickly. The decision was to modify the hinges by welding on a metal tab that would limit how far the doors could open. This would have been faster and cheaper than scrapping the stock pile of hinges already on hand and creating the dies to forge new ones.

Some early vans have unmodified upper hinges but lower hinges with a small welded metal tab. This looks like a preliminary fix possibly performed at the Flint or St Louis assembly plants. The weld is not ground smooth and applied only to a single hinge per door – sufficient to keep the door away from the corner and not slow assembly any more than necessary. Eventually, both upper and lower hinges received a larger metal tab and the weld was ground smooth (more or less, as shown in the picture). This style hinge is found on essentially all '61 – '63 vans. Which leads us back to the original question, why were the bumpers still installed if the doors could no longer reach them?

Some of this history comes from Bob Kirkman's 1987 article in CorvanAntics, Vol



Fig 3. Early style FC rear door hinge

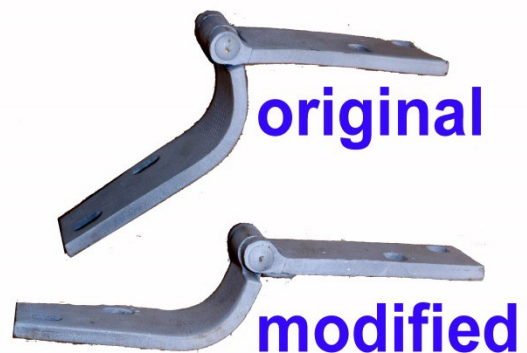


Fig 4. Rotation of original and modified rear hinges.

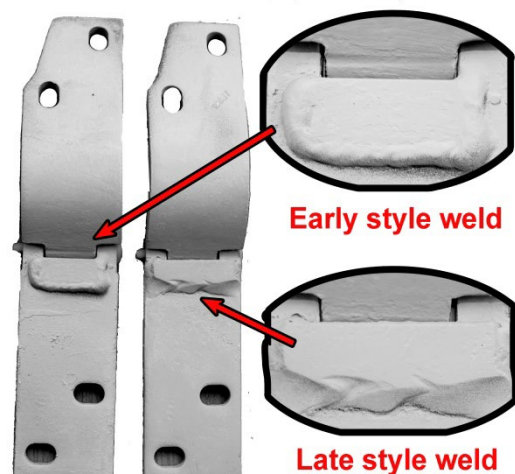


Fig 5. Early and Late Style Hinge Welds

15(6) about hinge modifications and the bumpers. In the article Bob speculated that the bumpers continued to be installed because of a large inventory of body panels with the holes already present for the bumpers. I believe they were retained intentionally, because door impact was just one of the concerns.

Maybe resolving of the door hinge problem cast doubt on the need for the bumpers and a preliminary decision to eliminate them. Some early vans lack the bumpers, and these must have been assembled from panels lacking the bumper mounting holes. This also would explain why the bumpers were included in the 1961 but not in later assembly manuals. In any case, the bumpers remained standard equipment for two more years, not as a “vestigial” artifact with no function, but reengineered for an intended use.

The 1961 assembly manual and parts catalogs identify “first” and “second” design bumpers. The original bumper was #3785718 (#1 in the picture), making it the same as those used as the side door bumpers. This bumper attaches via a pass-through screw to a plastic clip mounted in a square hole in the body panel.

But already in the 1961 assembly manual, the original bumper was superseded by bumper #3812749, which is the bumper identified as #3 in the picture. The 5/16-18 bolt of this bumper would not fit the original square hole and required a larger round hole in the corner panel. However, I have seen several '61 – '62 vans with a bumper similar to #2 with a smaller gauge bolt, possibly an undocumented interim bumper used with preexisting panels with the square hole.

The larger bolt of the “second” design bumper began to serve its function in mid-1962 when the “Rear door bumper reinforcement assembly” (#3812732) was introduced. This metal bracket located behind both left and right corners (see picture) was secured to the bumper bolt and attached to the rear interior body panel. As the name conveys the bracket served to strengthen the rear panel corners against minor impacts, not from the doors but other from other assaults. The bracket was installed through the 1963 production year.

The hinge modification served the problem at hand, but was not a very satisfying solution. Where the hinge bottomed out on the metal tab the paint was damaged leading to a rust line. To

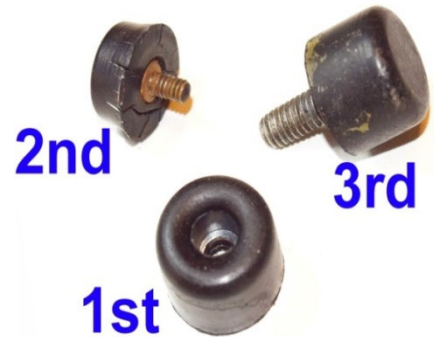


Fig 6. Three designs of rear door outer bumpers

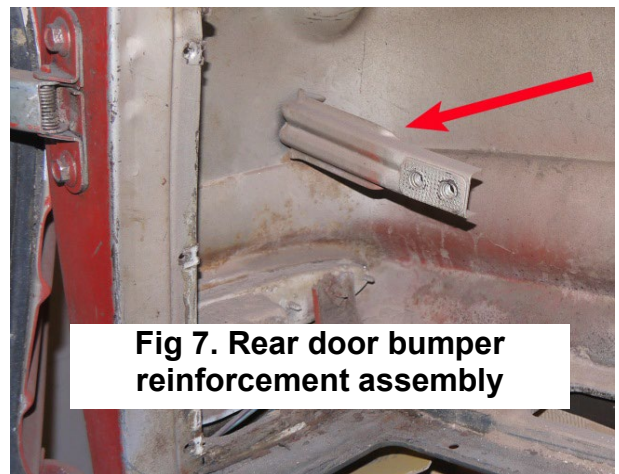


Fig 7. Rear door bumper reinforcement assembly



Fig 8. Typical rear corner dent.

remedy this, the hinge was reengineered. The new hinge (#3842361-2) had 4 knuckles and a center paw that checked the rotation of the hinge by striking an edge rather than surface of the hinge, thus preventing paint damage. This hinge first appears in the 1963 assembly manual, but installation appears not to have occurred until 1964.

And in 1964 when the redesigned hinge was introduced, the rear corner bumper was deleted. The 1964 Truck Engineering Features book states that the bumpers were deleted because the new hinges prevented the doors from impacting the body, but this ignores that the earlier welded hinge modification had already resolved this problem. I suspect that the bumpers were no longer needed as the attachment point for the internal panel reinforcement assembly, which Chevy failed to mention was also deleted, most likely as a cost-savings measure. By 1964 the dire FC sales situation had not improved and certainly GM was looking for other ways to reduce production costs. Compared to the cost saving measures taken the previous year, deleting these bumpers and an otherwise hidden bracket would have been an easy decision.

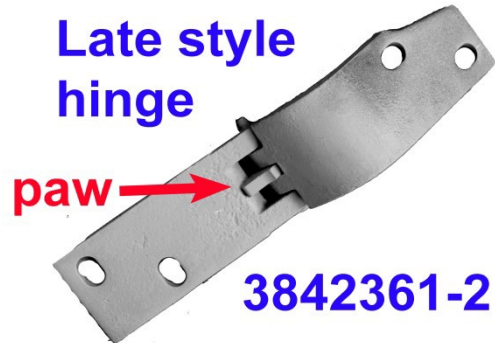


Fig 9. Late style FC rear door hinge

Rear Door windows

Those cost saving deletions imposed in 1963 have been much discussed in the past. Since we're focusing on the rear doors, this is a good time to mention that one of those measures was elimination for Corvans of the rear door windows as a stock item. The rear door windows became RPO A12, and this reflected forward to the left front door. Since in the absence of rear windows the inside rear view mirror was superfluous, it was also eliminated as a stock item. But GM did understand that is important for a driver to know what's behind the van, so the round outside rear view mirror on the driver side door (which was RPO D32 for other FCs) became standard for Corvans models. If option RPO A12 (rear window) was ordered, the inside rear view mirror was restored and the ORVM was removed.



Fig 10. Rear window delete in Corvan. Thanks to Kevin Clark for the picture of his van.

The Chevrolet Rear Door Script

One change beginning with the 1962 models was the placement of the “Chevrolet” emblem on the right-side rear door of vans (it can be seen in the picture of the green van above). This chromed emblem was present on the Rampside tailgate in '61, but was not present on the vans during the first production year.



Fig 11. Chevrolet emblem.

Check arm seals

Another cost-saving change was elimination of the check-arm rubber seals and seal retainer metal plates. These gaskets are moisture seals for the door openings into which the check arms insert. These were first deleted from Corvans in 1962, and in 1963 there was a plan to remove all the check arms and replace them with a canvas strap, but this change was canceled as shown in the '63 assembly manual. However, a decision was to additionally eliminate the rubber seal and its retainer from the rear doors of the Greenbrier.

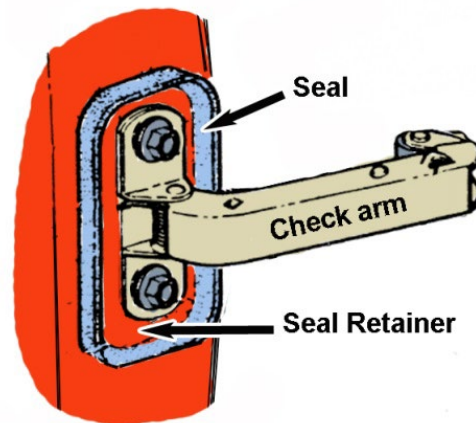


Fig 12. Side or rear door check arm.