



Fixing Broken Transmission Mount Bolts

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First thing, if this hasn't happened to you yet, IT WILL! If you're lucky enough to catch these bolts before they break, do yourself a favor and change them out immediately. It is a lot easier to fix them before they break, than trying to remove them after they break. This is a semi-common problem for these trucks and a quick google search will show many instances of this happening.

I was under my truck doing a routine fluid check (transmission, transfer case, differentials) prior to making a long road trip. While checking the transfer case fluid, I happened to notice that my transmission mount wasn't sitting right. It appeared to be leaning where it meets the transmission. Upon further investigation, I was greeted by two bolt heads laying on the transmission cross member and two sheared off bolts in the bottom of the transmission. Both of the bolts that hold the transmission mount to the transmission had sheared off in their respective holes. There was nothing holding the transmission mount to the transmission, therefore the rear of the transmission was not mounted at all, just sitting on top of the cross member. Driving the truck with a broken transmission mount is a very bad idea, so it was parked until fixed.



The first thing I had to do is get the transmission cross member and mount out of the truck. The transmission was raised with a jack and a jack stand was placed under it for support. Don't place the stand under the cross member, it's about to be removed. After the transmission was supported, I was able to remove the 4 bolts that hold the cross member to the frame. After some persuading and a few choice words, the cross member with the transmission mount on it finally released and fell on my chest. I was then able to see what was left of the bolts broken off into the transmission. They were too deep to grab with pliers, so they would need to be drilled. Finally, I removed the transmission mount from the cross member because it has to be installed separately.



Tool selection for a critical task like this is very important. You only get one chance to drill out a bolt before you jack something up. Using cheap drill bits and easy-outs from Harbor Freight might work, but you greatly increase the risk of creating a situation that you can't get out of. For these special occasions, I have a set of Norseman left-hand drill bits. Left-hand drill bits are bits that spin backwards and are used specifically for bolt removal. They are stupidly sharp and actually cut my finger when I removed one from the drill bit index. Unfortunately, quality tools cost quality dollars. This simple set ran around \$200 when I bought it a long time ago, and is probably more expensive now. They have paid for themselves several times over already by removing bolts from very expensive parts. I would highly recommend investing in a quality set of left-hand drill bits for these situations. Take care of them and they'll last you a very long time.

I chucked-up one of my left hand bits and started drilling through the center of the transmission mount bolts. I got about half way through the bolt when my bit caught a bur in the bolt. When the bur caught, it created enough force to back the bolt all the way out of the hole. This is the beauty of left-hand bits. With a standard set of bits, you will tighten the bolt further when you catch a bur. I was able to repeat this on the second bolt as well. Both bolts were completely removed with absolutely no damage to the transmission housing.

The bolts for this transmission mount are a M10-1.50 and are 30mm long. The factory bolts are supposed to be a grade 10.9. While drilling them, they didn't feel like anything close to a 10.9, they were way too soft. I went to my local Fastenal store and was able to source a set of grade 12.9 M10-1.50x30 bolts. I found a pack of three bolts there but only needed two, so I have a spare for something else. I also picked up a couple washers because the new bolts have a smaller head than the original bolts.

I covered the new bolts in Loctite thread locker and bolted the transmission mount to the transmission. The new bolts fit perfectly and tightened down great. Once the transmission mount is bolted to the transmission, you can reinstall the transmission cross member. If you talk to it nicely, it might go back in easy. Mine didn't, so I had to use a hammer. Once it was lined up, the 4 bolts were reinstalled and tightened. After the cross member is fully bolted in, use the jack to lift up the transmission to remove the jack stand and then set the weight down on the cross member. Once everything lines up correctly, reinstall the 3 nuts that hold the mount to the cross member.



If you catch this problem before the bolts break, it is a real easy fix. If you wait until they break, it could potentially get much more difficult. I highly recommend that everybody replace these bolts as soon as possible before they shear off and leave you in a mess of trouble.