

Failure of a Driveshaft CV Coupler

It began with a bit of vibration, then a squeak from the drive line of the Cross Country. 230K miles on the digital clock. A peek beneath the car disclosed a grease stripe on the underbody above the rear drive shaft coupler, which is a CV joint. A closer look revealed the marble size ball bearings were protruding from the front dust/retaining cover of the CV assembly.



I knew it had to be changed so a quick trip to Cary Volvo's Parts Department ensued. I approached Jess Castro, who is exceptionally knowledgeable about Volvo parts and applications, for a replacement. He said, "No luck kiddo, the CV joint is not available as a separate part, you've got to replace the W H O L E driveshaft."

The car was up in the air in my driveway and I peered beneath and realized to replace the driveshaft, the exhaust system would have to be removed to provide access. An otherwise simple job would become a day job. Then I recalled what my dad's mantra (he was a machinist during WWII), "what one guy built another can take apart and repair."

I reasoned that it wasn't necessary to remove and replace the driveshaft, but just the CV joint (which is what I planned to do in the first place). A donor shaft from a salvage yard was acquired and I set about removing its CV coupler. First the rear metal dust cover must be removed, then the retaining C-clip from the drive shaft spline. A gear puller is used to extract the CV coupler from the spline. Easy enough. 5 minutes later it was off. In another 5 minutes the bad CV coupler was off; you can see the bearings protruding from the front dust/retaining cover. In another 20 miles, the axle would have dropped on the road. Not good!



The donor CV coupler was installed in reverse order. Placing an impact socket larger than the driveshaft spline over the CV coupler, I tapped it in place with a ball peen hammer and replaced the retaining clip. I filled the rear dust cover with grease and placed it over the coupler and tie wrapped the boot to the driveshaft spline.



The donor driveshaft spline (above). There is a CV joint at both ends. Since one was needed, I have a spare CV coupler. So a task that could have become labor intensive was simplified by replacing the worn part as opposed to the entire driveshaft. I do not understand why this component is not offered as a replacement item. If you can use the other driveshaft CV coupler, contact me by email.

PROLOGUE

Separating the driveshaft from the haldex is challenging.

First remove the electrical connector to the haldex, next remove six retaining fasteners attaching the CV to the haldex yoke. Next slide a jack (transmission or motorcycle) beneath the differential to support the cradle. Remove the two forward cradle bolts and loosen, but do not remove, the rear cradle bolts. Remove the driveshaft support yoke forward of the haldex. Next lower the jack to tilt the haldex downward, and then push the driveshaft upward or downward to gain sufficient clearance to remove the CV coupler from the haldex yoke. You may have to repeatedly strike the CV coupler with a hammer to separate it from the haldex yoke. Alternately, there are two 1/4" (hard to see) access holes located 180 degrees apart between two fastener holes on the CV coupler's yoke side for a long slender pin. Insert a pin and use a hammer to tap and release the coupler from the yoke.

Reverse the procedure to install and insert the replacement CV coupler into the yoke. Lift the differential cradle into place and replace and tighten all fasteners. An extra pair of hands will facilitate decoupling and re-coupling the driveshaft to the yoke. One person can accomplish coupling with a bit of creativity and strength.

When I was 12, my dad gave me a set of tools for my birthday. I've still got those wrenches. His advice was to learn a trade and acquire a profession because both will serve you and should your profession vanish, your trade will feed you and your family. He was right.

My trade paid for my college education and now serves as my advocating. I worked for Jack Kessler, Kessler Studebaker and Renault, opposite Kodak Park (West Ridge Road and Lake Avenue) in Rochester, NY. I recall the days when Kodak employees received several thousand dollar annual profit sharing bonuses. They'd use that bonus to purchase a new Studebaker Golden or Gran Turismo Hawk or a Renault Gordini. I drove a Caravelle.

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