

# Toyota 5-speed conversions from HVDA

BY HELENA VAN DEN AKKER



Herman & Helena in their 5-speed TR250

**M**y husband Herman began his career as a tool and die maker in Holland where we were born and later he became a machinist. After we got married, we moved to Toronto, Canada. He worked for Acme Screw & Gear, on the production line at first and soon progressed to gear cutting machines and later worked in the maintenance department, rebuilding machinery. We lived in Toronto for 3 years and then moved to California. In the beginning, he worked in different places and eventually opened up his own machine shop. He had a career-long passion for improving existing machinery and tools wherever he could and because of his training and experience, he was able to use his skills to make improvements to our own Triumphs. He restored both our daughter's TR3B and our own TR250. They were stripped down to the last nut and bolt, and bodies removed from the frames. He did this in his spare time,

while operating his machine shop. I forgot to mention that he built a sailboat in our backyard, a 32ft Westsail. We used it for 10 years and he finally sold it. I was always getting seasick and he decided we should turn to sports cars.

After the completion of both cars he retired from his machine shop business and started to rebuild transmissions, differentials, overdrives and half-shafts for all British cars. He made all the tools necessary to work on them properly, including a transmission dynamic test fixture. It allows proof of performance, before the transmission is returned to service.

He ultimately became disillusioned with the inability to source Triumph overdrive and transmission parts, as well as with the high cost of procurement once they were found. So, he came up with the idea to create a Toyota 5-speed transmis-

sion conversion kit, to fit the TR2 through the TR6 Triumph automobiles. It took a full 2 years of development time to complete the kit. At first he just wanted to use it on our own cars and perhaps offer it to some of our friends in the car club, but soon he had so many requests and had no option but to offer the kit to the worldwide Triumph community. So he started HVDA Transmission Conversions. He works from our home in the mountains of California, custom designed with the large shop and garages necessary to support his hobby of improving Triumphs.

The kit makes it possible, to install a Toyota gearbox to anything from a TR2 to a TR6, utilizing a donor gearbox from the '80s Celica, Supra or truck transmissions. The Toyota box is aluminum and only weighs about 70 lbs, which is 50 lbs. less than the Triumph box with an A-



Herman at work

type overdrive attached. The Supra box is used extensively for modifications to a large number of marques and is good for over 300 horsepower, many more horses than any Triumph engine could ever produce. The Toyota box is much easier to shift and also quieter and best of all, it does not leak!

Installation is straightforward, all the parts are included, even the hydraulic throw out bearing system and the new speedo cable. No need for special tools, just the normal every day hand tools that any good mechanic should have in his toolbox. The HVDA kit includes a new bell housing that adapts the 5-speed Toyota transmission to the engine, a gearshift lever adapter, a hydraulic clutch throw-out bearing with steel braided lines, speedo cable and mounting bracket, output flange and slip yoke, transmission mounts and

brackets, as well as a new disc and alignment tool, a pilot bushing and sleeve. It also includes a very easy to follow, step-by-step, Instruction Manual. The only thing it does not include is the transmission.

One could reasonably ask "why would anyone want to replace a Triumph transmission"? The answer here has to fit the needs of the owner. In our case, we have driven our TR250 at least 10 times to the VTR and also several trips to car shows in Vancouver. Some of the trips we did covered more than 6000 miles round-trip. The 5-speed made the driving a lot easier on the Interstate, the engine purrs along at 2,500 RPM at highway speed, rather than howling at closer to 3,500 RPM with a 4-speed Triumph transmission. Also, having a Laycock overdrive is just more parts to go wrong. Now that we can legally cruise at higher speeds on the Interstates

(at one point on the I-10 in Texas, there's a 40 mile stretch posted at 80 MPH), it seems like a good thing to have a 5-speed and not lumber behind the trucks. Our Triumphs are a pleasure to drive and we spend a lot of time behind the wheel.

In the meantime we have purchased a 1971 TR6, which Herman did not restore himself. He is making all the upgrades to the TR6 that the TR250 and the TR3B have and eventually it will perform at the same level. Our first long trip with the TR6 was to Vancouver in August 2010 (the All Triumph Drive-in) and in October we attended the VTR on Jekyll Island, GA, 6000 miles round-trip. **RAGTOP**

To learn more about Herman's products, please visit his web site [www.hvdaconversions.com](http://www.hvdaconversions.com) and see his ad on P. 12



HVDA kit components



Toyota 5-speed installed in TR250 frame