

## R10Q-1 Overdrive

The R10 is a favorite transmission of mine to be used in our beloved VCVs. Here's a few thoughts on them.

### Transmission/OD

The complete unit consists of the front portion which is the transmission and the rear portion which is the OD. The front part is fairly standard and comes in our vans as a standard 3 speed. The rear part is like an added-on segment that replaces the original extension housing. The original extension housing has a molded cast piece that includes a rubber mount for hanging the transmission from overhead. This extension housing is only found on our G series vans. Other vehicles have an extension housing that has provision for a lower rubber mount which is then attached to a crossmember running side to side under a car or truck. I know that the OD was a Regular Production Option (RPO) on our vans but I've only ever heard of one. It was on the VCVC site but there were no clear pics of the mount posted. I do believe they came from the factory with some kind of add on hanger transmission mount similar to the ones found on the THM350 automatics offered in 68+. The front part is the transmission and the rear part is the OD. The OD can be removed from the transmission and then installed on another transmission. This is real hand since not all transmissions are the same. More later on swapping transmissions out to mate with the OD.

### Buying one

Look for the R10Q-1 casting on the left side of the case. Other versions probably fit our vans but I have no experience with them. I have heard that the R10-H is the model fitted to our earlier 3 speed manual transmissions found in the 64 and 65s. While this version will give you the OD, it's the transmission that has no synchro on 1<sup>st</sup> gear. This means you have to come to a complete stop to put the transmission in 1<sup>st</sup>. The transmissions can be easily identified by the 4 bolt cover. The cover is located on the left side of the transmission and has the two shifter shafts coming out of it. The preferred model of transmission is the 7 bolt cover model with has the 1<sup>st</sup> gear synchro. Since the transmissions are easier to find than the OD part, focus on finding a good looking OD. There are a few things you can tell from the outside that will allow you to determine if certain parts are good. Unfortunately, there are a few critical internal parts that can only be inspected if the OD is pulled apart. Since most sellers wont allow you to disassemble the OD, you are limited in how much you can tell about any failed internal parts.

The first thing to check is the OD solenoid locate don the drivers side of the OD. It's the shape of a 12 ounce can but a little smaller. This is what engages the OD. It's handy to have a small battery about the size that comes in a small motorcycle along with a couple of electrical leads with a 15 amp fuse installed inline. The solenoid has two insulated terminals coming out of it. Touch the negative lead to the case to the right-side terminal and the positive terminal to the left side. There should be an audible click. If not, then touch the negative terminal to the case while the positive lead remains on the terminal. If still nothing, then reverse the leads and try again. If no click is heard with any of these variations then the solenoid is bad. They can be purchase new for ~\$350. Certainly that's a bargaining point that is nice to know before putting your cash down. The other smaller unit on the right side is the governor which is

difficult to test and is available for ~\$35 anyway. There is no need to worry about that now. It should be there though and if not, why is it not?

If possible, pull the fill plugs from the OD and drain the oil into a clean pan. If there are any metal pieces then that's a very bad sign. The transmission can also be drained by standing it up onto the output shaft but any metal seen could be coming from the front (transmission). Smell the oil to see if it smells burnt.

If they'll let you, pull the bolts off the transmission cover. If the cover has two shafts coming from it then it is a 3 speed. If there are three shafts coming from it then it is a four speed. With the cover removed, spin all the gears to check for chipped or broken teeth. Any damaged gears seen indicate rough usage. These gears are available but the price goes up and also means the transmission needs to be rebuilt. The key takeaway is that the OD part is the key piece. The transmission part can be much more easily replaced. You may also want to replace the transmission to customize the gear ratio for your van.

#### Servicing the OD by others

Herm the Overdrive Guy is the guy for parts and service on these. I've dealt with him and he is a straight shooter.

#### Transmission Options

#### Wiring the OD

#### Cable install

#### Preferred oil and servicing

#### Driving with the OD