

# Garrett Dmax VGT turbo vane control sticking issues

Commonly associated with DTC P2563 P2564 and P003A on LLY LBZ and LMM Duramax engines.

The cause is the unison ring sticking on the pilot. This is due to corrosion from corrosive condensation. There are plenty of how to online for removing the turbo from the truck so I'll just add some notes and assume you have a decent understanding of how to remove and split the turbo.

Notes: The turbo will come out without lifting the cab. The passenger side up pipe needs to come out. It is a tight fit, but it will come out. The driver side up pipe needs to be loosened. Probably easiest to remove all bolts and leave it float loose behind the head. The heat shield will need to be bent to be removed prior to removing the turbo and we trim it on the passenger side before reinstalling. The AC compressor can be unplugged and unbolted and laid off to the side to make room. From there I'll skip right to the details:

We offer replacement turbochargers for this application, but in most cases you can fix yours and it will be just fine.

Once apart I needed to pry the unison ring off the pilot. It was stuck that bad. Be sure to inspect the unison ring to make sure it is not cracked. If it is cracked the crack should be pretty obvious and typically on the inside diameter. To clean I started with a square cut carbide burr and went around cleaning the base and the hub surfaces until the ring set on freely.



Following the carbide burr I switched to a Roloc type disc. It took a few discs as they wear out quickly.



The finished surface has a nice polish to it. I smear this with a liberal coat of dielectric grease to it. The polished finish plus the grease will hopefully prevent repeat corrosion but only time will tell.



Just for grins I run a flapper wheel on the ID of the unison ring to clean it up a bit but there is typically little to no buildup here.



Once the ring is installed you should see that not only does it drop right onto the pilot, you will have some decent clearance. You will then need to align the vanes in the unison ring along with the slot for the control lever.

