Turbo linkage

647 version engines are very sensitive to low boost conditions in comparison to the 612 and far more trigger happy when it comes to low boost related LHM.

Use of a DRBIII makes solving low boost issues far easier. You gain access to an DRB actuator menu that can physically manipulated the vane **linkage** through it entire span.

Keep in mind you cannot yourself manually move the servo **linkage** because it is a worm gear drive. Without a DRB you can however disconnect the **linkage** and manually manipulate the vane's bell crank (NOT the servos) and check the **linkage**'s pivot points for corrosion induced galling.

Without the DRBIII you should be able to observe the bell crank movement during idle while disconnecting the MAF sensor which will move the vane to LHM position almost immediately. Plug it back in and it should return to its normal position.

If you first don't observe bell crank motion after checking the vanes and **linkage** for corrosion AND if your MAF disconnect self-induced LHM doesn't show motion of the bell crank, e-mail me for resistance values of the servo's pins which will help you determine if the turbo/servo assembly needs to be replaced. Doktor A

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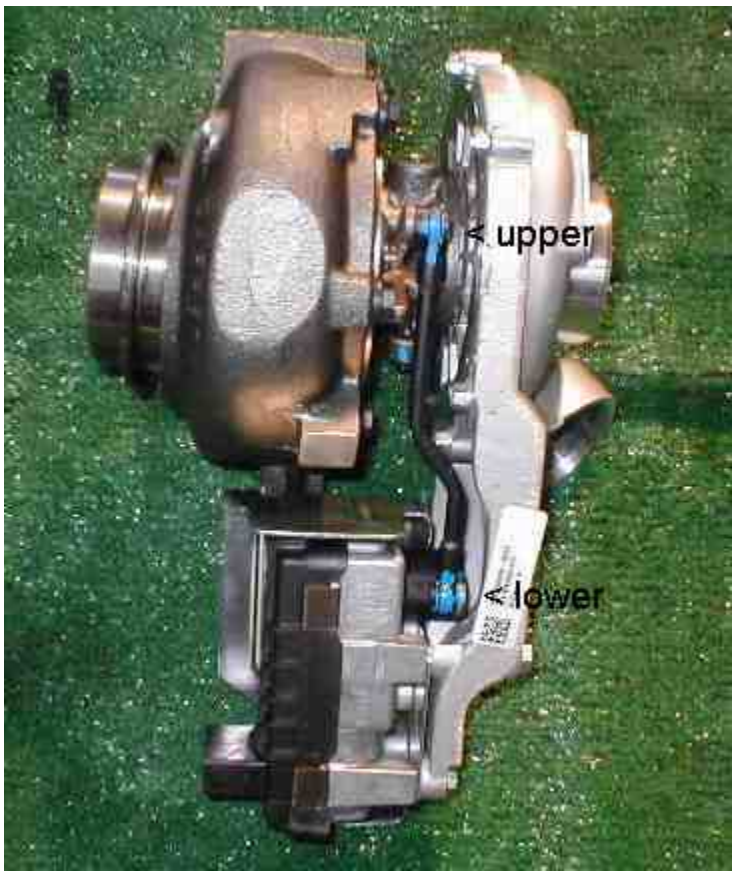

Fixed!!!

The bottom swivel on the **linkage** was frozen from corrosion. Took apart, cleaned, lubed with a touch of moly, back together and all is working. Got my lovely **turbo** whine back!

This is why I love this forum. Once I got the tip from Doktor A about disconnecting the MAF connector to test the bell crank servo/linkage I was able to track it down. Should have posted my problem earlier. I'd been scouring posts for any more info, and tried everything I could find, finally got it without paying big $$$.

Thanks again to the Doktor

I just fixed mine today ..... it started acting up two days ago when I started driving the van again (van had been sitting for the last three months more or less, and not being run other than to move it a few feet)

It took me around two hours or so .....

I pulled the upper heat shield and the air cleaner to **turbo** hose (including crankcase vent hose) which gave me access to the top portion of the linkage arm/pin from above. I wish had worked on that immediately (that was where it was frozen) but I also pulled the other heat shield between the **turbo** and the air filter box, to get better access to the lower portion of the linkage arm/pin, down by the **actuator**. I also removed the **turbo** to intercooler hose and inspected it for splits.

Once I got the linkage arm off the top pin on the lever at the **turbo** it rotated very freely on the pin down by the **actuator** - so I decided to not to pull that end of the arm - since I had already "lubed" it with some PB Blaster .... and it looked to be a bear to do on the vehicle (you have to do it blind, if you leave the **turbo** on the vehicle)

Hit the top pin with a wire brush and slapped some disc brake caliper grease on it and stuck it back together and reassembled everything.

First thing I noticed was that the lever on the **turbo** was now in a different place (much lower) Started vehicle up and pulled the cable to the MAF and the **actuator** immediately pushed the rod up and moved the lever on the **turbo** up to where it had been "stuck". Then I got in the vehicle stuck it in drive and rev'ed it up to around 2,000 rpm ..... and my gauge showed around 10 psi of boost (before the most it would was 3 to 4 psi while driving down the road at 60+ mph)