

# The Definitive 'How to fit a T28' guide

Morning all,

Looking for bits of info on adapting a t28 for a Rover i found only dribs and drabs of information in a few scattered thread, and alot of 'i think' and 'i heard that'. So here we are, i went down to Southend on Friday and bought a bare Nissan GTiR Turbocharger unit.

The two most common T28 units are that people use for the Rover upgrade come from 2 cars. The Nissan Sunny/Pulsar GTiR or the 94 on Nissan 200sx S14 and S14a.

They are both T28 turbochargers but the Pulsar has a little higher boost threshold (should see full boost at circa 3000-3200 opposed to the SXs 2800ish), but the Pulsar has a large exhaust side (.86 as opposed to .64) as such you will gain more power for the same boost and mods against an SX turbo but again, with higher boost threshold(Pulsar kicks a bit harder when it comes on boost though).

OK here we go:

Firstly, youll need to address 3 issues to get the turbos to fit:

- 1 - Rotating the compressor(inlet housing) , or both housings on the Pulsar unit.
- 2 - Fitting/ fabricating/ bodging an actuator in place.
- 3 - The feeds and drains (oil and water)
- 4 - The compressor side inlet and outlet adaptors.

Little key for those who get a little unsure:

Compressor = Inlet(alloy) side of the turbo

Turbine = Exhaust side of the housing

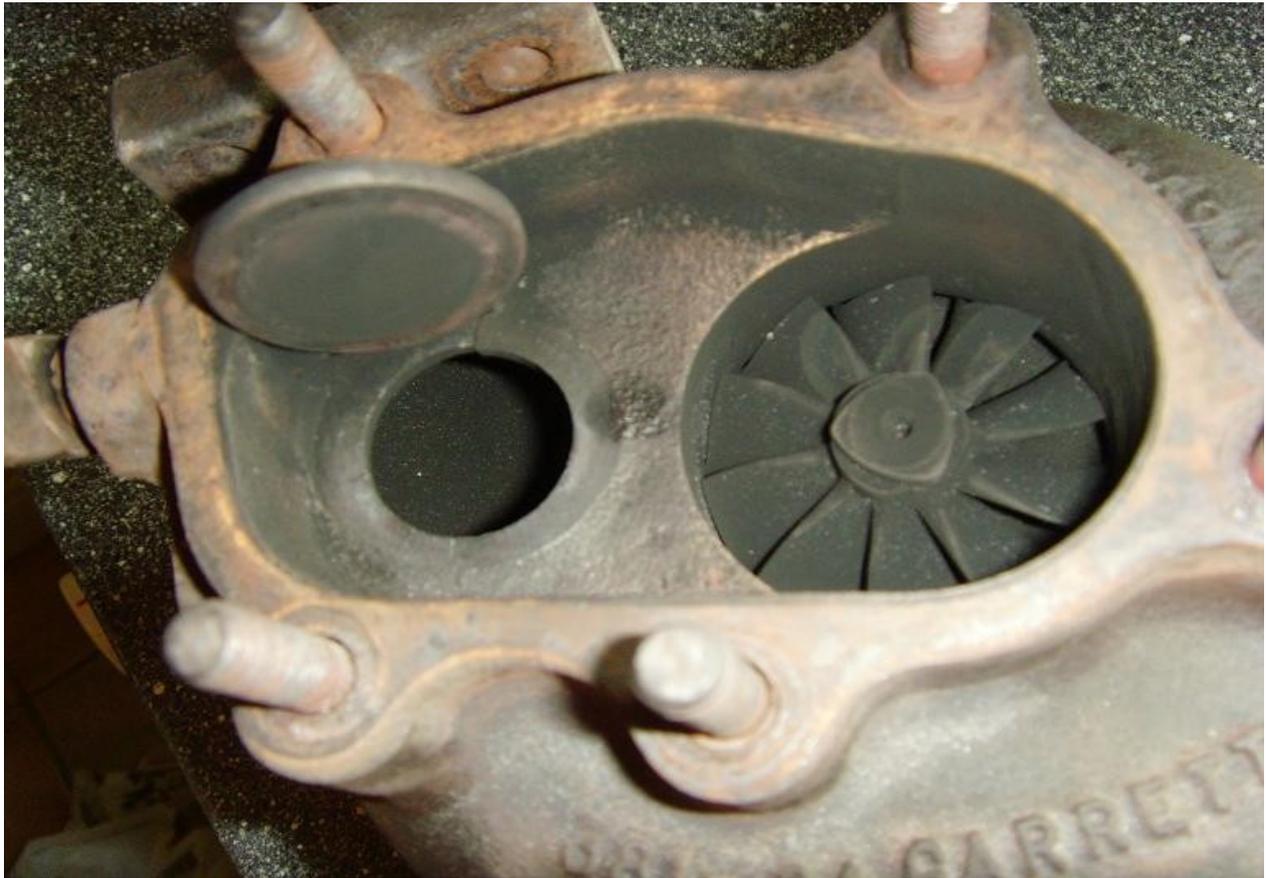
Obviously both have an inlet and outlet, compressor inlet is what the airfilter attahces to, the outlet is the bit that pipes off to the intercooler. Turbine inlet is what bolts to the manifold, turbine outlet is what the elbow bolts to.

This is a stock Pulsar turbo with all the feeds/drains removed:





You may find cracks around the wastegate port, this is perfectly normal on the T2 family exhaust housings and rarely effects boost levels untill the cracks get really wide.



If the turbos pretty good like this one, use some gunk and a wire bursh to clean the compressor housing, or if its got that wierd alloy growth stuff all over it use some Traffic Film Remover as well, and very hot water:



Should come up like a spanker, i left a tiny amount of dirt on for the picture as last time i had a few people saying 'youve sprayed it silver havent you' lol:



Approach the beast:



Here is the turbo with the compressor flanges:



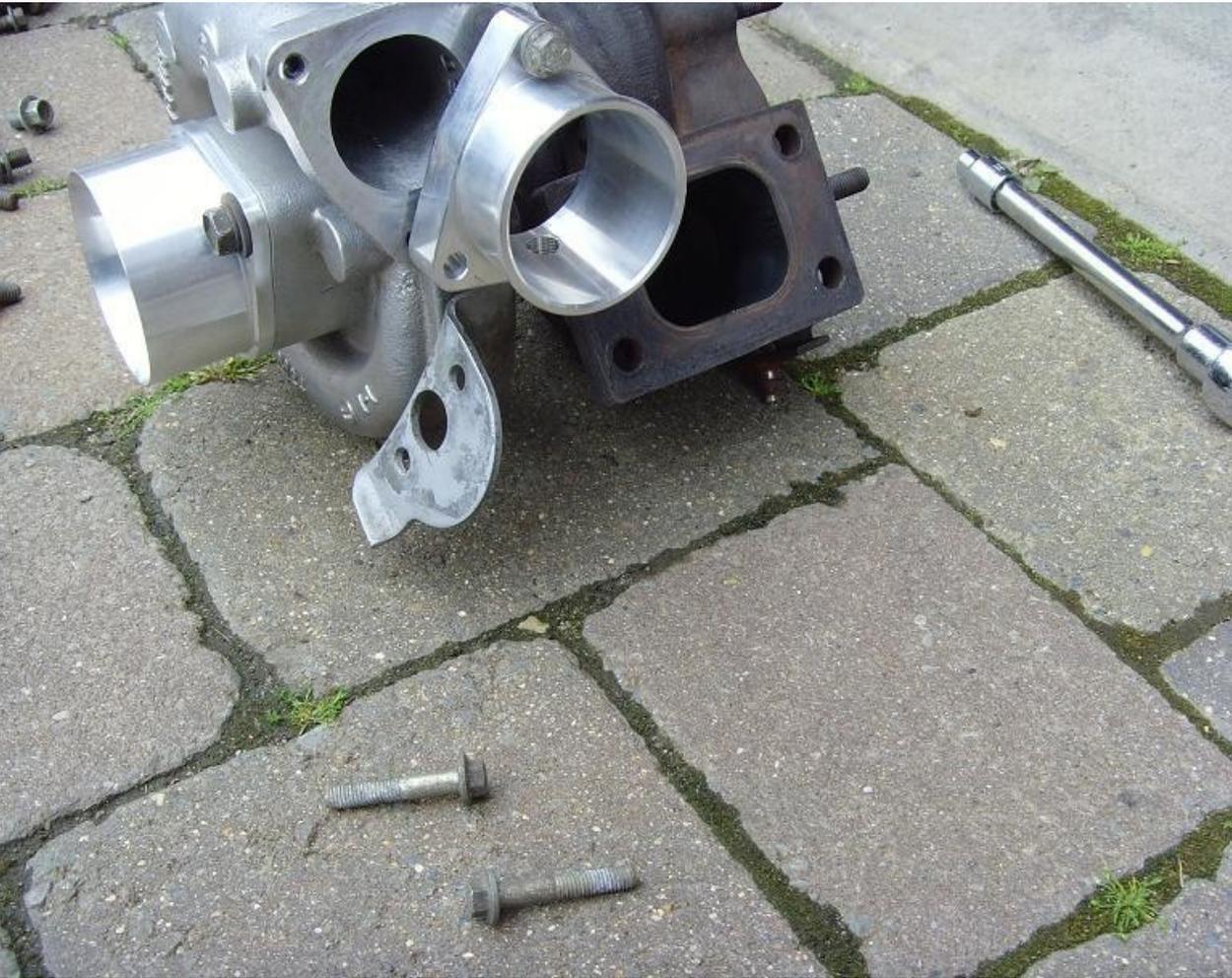
Dig around for some bolts:



Find some bolts:

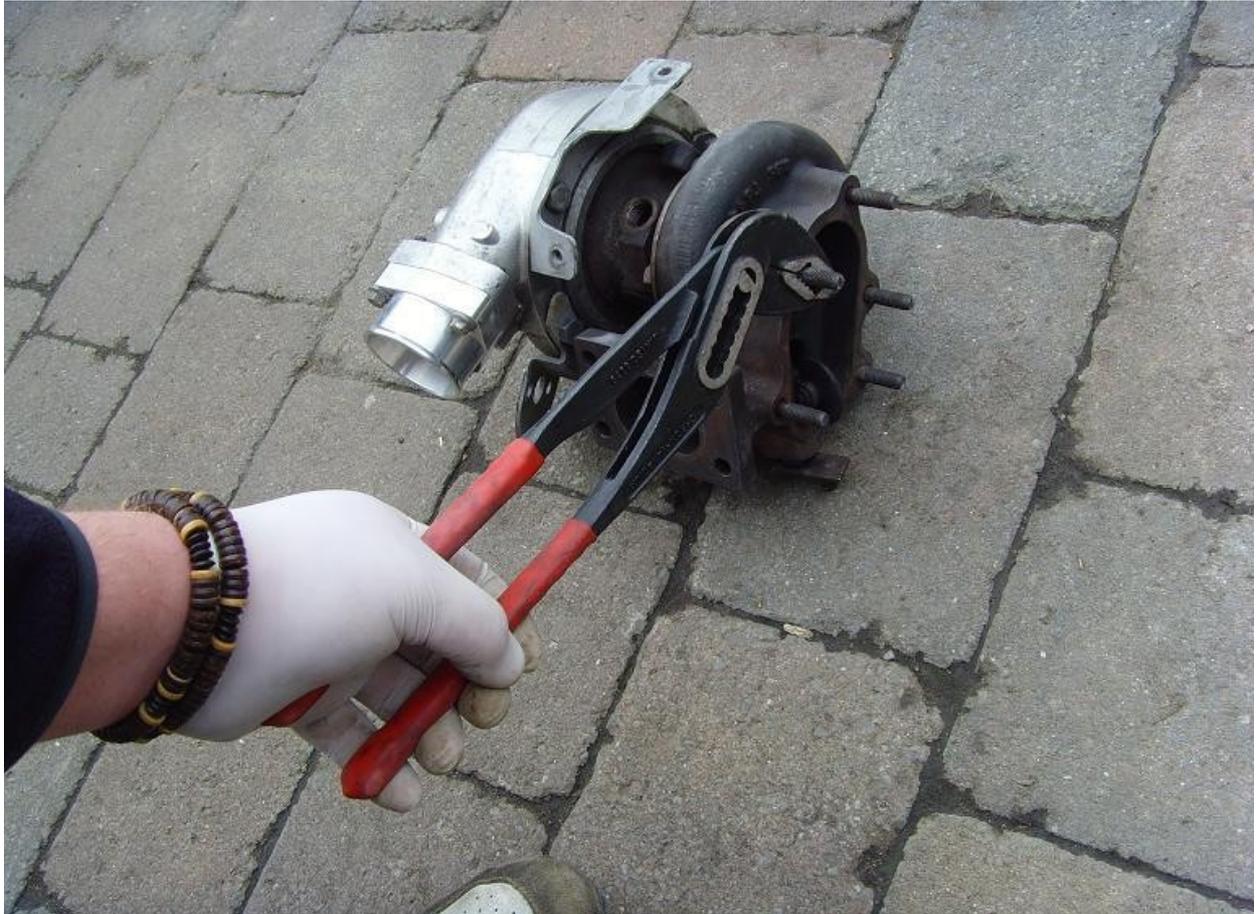


Flanges go on:





Remove studs carefully from the turbine housing:



Quick reminder of what the t25 looks like in situ:





There is a bracket that in the Nissan set up secures the hardpipe, its not needed here but obviously the part that clamps the housing to the core is, so we'll just cut the protruding bits(you can also see the 13mm bolts youll need to undo when rotating the housing):



Cut along this sort of line (here you can see the bolts on the turbine side that youll need to loosen off when rotating):



Time to rotate the housing, it really is very simple, i think alot of people are worried about how you do it, and tking turbos apart, but again, its very simple. Loosen the 6 bolts(compressor) and swivel it round till the core witht he drains and feeds, matches the compressor in the same way it is on the T25(ie oil drain for example, facing nearly upwards alongside the compressor outlet).



Once you think its about right, tighten up the bolts and match it against the 25 in the engine bay (sorry for the blurry picture, id hit my my hand with a hammer at this point and was fast losing co-ordination) :



Actuator fitting time, the best option is to buy the bracket and actuator (GBE sell them both) or you might have got one with the turbo. But, you can use the t25 one to get by , or if you're impatient like me and want to feel the difference that day!! Put the bracket up for a test fit so the rod aligns with the wastegate lug:



Drill the hole in the edge of the t25 actuator bracket and bolt it on to the compressor housing on one of the housing bolt positions.



You'll notice that for some reason the Rover Actuator arm uses a t3 tip (the bit with the hole that goes over the lug) as such this is physically too wide (by about 2-3mm) to fit on the 28 lug **and still be clipped in place.**

So true bodging style grind the tip by about 2-3mm till it fits on the lug and you can see the circlip groove then secure (You can do this with circlip or paper clip)



Basically strip all the bits off the t25 (drains and feeds) and fit to the 28, remember you'll need the oil adaptor:

This is the oil feed adaptor available from Grant for around a £11



Now the turbo should be ready to fit:





Laso fitted an alloy lower rad pipe:



Refit turbo , lay back and realise how utterly poo the t25 is.

Ill add pics of the turbo in location but i had to go to work in a rush.

Hope this is of help.

Mark