

How's That Car Coming Along Dave? (or a tale of two turbos)

by David Hanson

How's that car coming along Dave? This is a question that I'm often asked at work – ever since I started thinking about building a car – and one which, lately has always received the same answer. I haven't done a thing on it for months.

Eight months to be precise – ever since I moved house, the car has been buried in the garage (under at least 5 bikes at present) while other things have taken my time. Sanding, painting and other redecorating tasks have taken most of the house duties. So far I've painted 4 ceilings and 3 bedrooms. Totally redone the downstairs toilet, painted the downstairs bathroom and toilet, upstairs ensuite and sanded and urethaned three floors.

However that's not the point of this article. It is my other cars that have also conspired to thwart any attempts to restart work on the Seven.

Some of you may know that I have two Lancia Thema 8v Turbos – same year – same colour. It's a long story as to how or why I have twin cars but that's another story. Needless to say it does confuse the neighbours.

Just before Christmas (3 months after moving) Sandra's car started to make a strange rattling sound which appeared to be coming from the front of the motor (Cam belt area). A close look found a suspect bearing on the balance shaft belt tensioner. The local Fiat/Lancia dealer could get one from Italy for around \$140! Luckily it was an SKF bearing so quoting the numbers off the edge got me a very near replacement for \$25. I say very near as the original used a very high temperature grease which SKF no longer use – I was assured by the SKF supplier that the standard grease would be more than adequate for the job (they had recently supplied the same bearings for someones Delta Integrale



“There's a chassis under here - somewhere”

so they should suit my needs). Fitting the bearing made no difference to the rattling sound so the hunt for the source continued.

I removed all the fan belts to ancillary equipment – no difference. Removed and checked the starter motor – no difference. Then after listening really closely and determining that the sound continued for a short time **after** the engine stopped, I began to suspect the worst. The Turbo-charger.

Removing several bits allowed me to get to the input side of the Turbo where it took only a quick wobble of the impeller to determine that the Turbo was indeed the culprit – the turbine shaft should have virtually no sideways movement, this one moved several millimeters!!!

Removing and stripping the Turbo revealed that the turbine shaft was broken in two and the rattling was caused by the exhaust impeller rattling around inside the exhaust housing. What's odd is that the car still seemed to be performing well. I'm at a loss to explain how.

Obviously the Turbo was beyond repair, so I rang the local Lancia wrecker and \$400 later I had a replacement Turbo.

The "new" Turbo felt really good – they do tend to carbon up over time and get quite stiff to turn by hand, but this one was really free turning. I suspect that it may have been rebuilt in its recent past, so I decided to fit it without getting new seals and bearings fitted.

On starting the car, there was still obviously something not quite right as the "new" Turbo didn't sound as it should. I suspected that it wasn't getting any oil. Removing the oil feed line and restarting the motor confirmed this. The oil feed line was blocked – which obviously was the original cause of the old Turbo failure.



Cracked exhaust housing - (crack indicated)

Removing the oil feed line – itself no small task – and then trying to clear it with welding rods and solvents showed that line was quite very definitely blocked right by where there is a mounting bracket which bolts to the exhaust manifold. Solvents and welding rods would not budge this blockage – getting the pipe near red hot with an oxy/acetylene torch then blowing compressed air through it did.

With the pipe cleared and refitted the car was now going again and better than ever. Now to start thinking about restarting the Seven.....

However, about six or eight weeks ago my car started to blow smoke – lots of it. Bright, Blue oil burning type smoke. So much that following traffic was completely obscured. I knew immediately what it was. The Turbo!

I had been half expecting it for some time I suppose as the car has nearly done 380000kms without any major engine work I know of. The Turbo had blown it's seals so I decided to get this one repaired as I couldn't find another replacement locally. There was a Turbo in Auckland but they wanted \$550 plus freight plus GST for it, which was way too much for a used Turbo in my opinion.

So I took the Turbo to Total Turbos. The bloke there does a lot of work on turbos for the "boy racer" crowd but definitely knows his turbos. After soaking the unit for almost a week in

penetrating oil and other solvents – to remove the baked-on carbon on the impellers – the Turbo was declared too far gone for repair so I had to find a replacement.

The local Lancia wrecker didn't have one so I searched the internet for other cars that used the same turbo (Garrett Air Research T3) and discovered that the Renault Fuego Turbo used the same turbo. So I rang the local Renault wrecker in Upper Hutt (who also used to be the Fiat/Lancia wrecker before they sold that part of the business to the Lancia wrecker I had contacted earlier) to see if they have a Fuego Turbo.

Yes they do! Great I'll come up and have a look on Monday. Over the weekend I got to thinking. Every Renault Fuego Turbo that I can recall seeing was usually getting thrashed to death. I wonder what other cars also used the T3. Back to the 'net.

I found quite a number – MG Montego/Maestro Turbo, Fiat Croma Turbo, Alfa 164 Turbo (never released here) early Nissan Skylines and SAAB 9000 Turbo. Most SAABs I've seen are well looked after and not usually thrashed. So I tried the SAAB wrecker (same one as the Renault wrecker), do you have a SAAB 9000 Turbo in stock? Yes, Great I'll come right up.

Upon entering the wreckers I'm immediately recognised "Mr Lancia" they exclaim. It's not a

good sign to be so well known by a wrecker, is it?

"Why do you want a SAAB turbo? Why not get a Lancia one?" they say.

"Can't find one anywhere" I reply

"Bloke next door has one" they say "lets have a look"

We go out to the yard which they share with the Fiat/Lancia wrecker, to where there are 5 Lancia Themas, one of which has a turbo on it! "Bloke doesn't know what he's got!" they say. "let me talk to him, I'll see what he wants for it"

Next day I phone and talk to someone else – "You want the Lancia bloke next door" they say "I'll put you through"

"I'm after the Lancia Thema Turbo you've got" I say after being transferred.

"Don't have one" is the reply.

"Yes you do! I saw it yesterday" I say (rather exasperated by now)

"Oh, do I?" he says "I'll have a look, I'll call you back soon"

Sure enough he does phone back and surprisingly **does** have a Turbo for a Lancia Thema, which I can have for \$300 plus GST – done.

Two days later I pick up the turbo and ask if, by any chance, he has the pipe from the turbo to the intercooler as mine has a split in it.

"Think I threw that in the trash" he says " didn't look too good though"

Found the pipe in the trash – just a bit dirty but no splits. The wrecker "throws the pipe in" as he was going to trash it anyway. "Brilliant" I think quietly to my self trying not to smile – knowing that the retail price for this pipe is \$220 plus GST!

The turbo is a little stiff – carboned-up – so off to Total Turbo again for seals and bearings. After a few days soaking and cleaning the Turbo is repaired except there is a crack in the exhaust housing. Every other housing I have from my growing collection also has a crack in the same place. Design flaw? Can we fix it? I brought the housing along to the last club night to ask some expert welding advice.

"You clean it, file it prepare it and I can weld it" I'm told by Alan Price. The cleaning and other preparation is the time-consuming bit, welding it is easy.

Next day, however, I get a call from Total Turbos – they've managed to find a good housing, and for **only** \$400!

After some thought, I decided to go for the replacement housing as the car's been off the road for 4 weeks now and I want it fixed, **NOW!**

So my car is now back on the road and going better than it has for a long time. Moral of the story is "If you have a turbo-charged car – give it regular oil changes. I certainly will in the future after the past six months. Must be time to start thinking about re-starting the Seven project....."

So, How's that car coming along Dave? I was asked only yesterday....

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