

VNT – RECONDITION OR NOT??

The big topic of conversation in the industry at present is the ‘no repair / no parts’ policy of some OEM manufacturers where variable geometry is concerned. The reason for the OEM policies can be understood and it has probably been a very difficult and knowingly unpopular decision to make.

From reading technical bulletins, the main reason appears to be a concern over the ability to set up the turbos after stripping and re-building. The danger is that if you repair 10 turbos and set them exactly to the setting supplied by the OEM, they could all have slightly different air flows at the same speed. These different air flows could be picked up by the air mass sensors in vehicle engine management systems and it is possible that errors could occur. If the OEM has supplied the parts and turbo settings, the error could fall back to the OEM making them potentially liable for any faulty repairs. We are told that the only way of avoiding this is for each reconditioner to use an accurate flow metre to set each turbo - but this equipment is not currently available on the market and the required data for setting the flow has not been released.



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FEATURED IN THIS ISSUE



**New Catalogue
and website**



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Turbine Housings**



**GT/VNT 15/17/18
Shaft and Wheels**



**Repair Kits
Explained**

Quality Replacement Turbocharger Parts



Continued from front cover

The problem the industry faces is that most of our customers have been repairing these new generation turbos for many years with great success and it is a

growing part of their business. Many companies have also recently invested a lot of money in the essential VSR balancing equipment. They are now being told to stop doing the thing they do best and start selling boxes of complete turbos (along with everybody else) and for non-distributors this means selling in direct competition with the distributors who are supplying them the turbo in the first place. For some, this clearly isn't going to work.

Our policy at Melett is not to directly compete with the OEM where the parts are readily available at a price which allows competitive reconditioning. As a result of the recent OEM policies and overwhelming customer demand, we are pleased to announce that turbine shaft and compressor wheels are now available to repair many popular VNT models. Over the past year, we have invested in the necessary casting tooling and carefully produced replacement parts to give the aftermarket the choice it needs and deserves. We have also updated our repair kits to include the turbine clamp washers and compressor bolts to allow your repair to look as good externally as it is internally. To recondition or not should be the choice of the reconditioner or vehicle owner.

One important point is that a quality repair is essential – poor quality, cheap repairs can give the industry as a whole a bad reputation. VSR balancing must be performed on the smaller turbos to prevent failure. If you need information on the VSR machines available on the market, contact Melett Sales for further details.

GT/VNT 15/17/18 Shaft and Wheel		
Melett Part Number	Replacement OE Number	Description
1102-017-435	704580-3	Shaft and Wheel GT18 Nissan/Mercedes
1102-017-436	434533-6	Shaft and Wheel GT17 LAGUNA – fits 708639-000#
1102-017-438	434533-7 434533-9	Shaft and Wheel GT17 Fits Audi/VW 1.9TDi turbos
1102-017-439	704580-1	Shaft and Wheel GT18 Opel Vectra/Astra 2.2TDi Mercedes Sprinter 709836 Saab 2.2TDi
1102-017-440	434533-18	Shaft and Wheel GT17 Alfa Romeo/Fiat/Lancia Turbos 712766 / 716665
1102-015-435	433165-1 433165-7 434713-1 434715-5 433298-1 433298-30 433298-42	Shaft and Wheel GT15
1102-015-437	433158-1 433290-4	Shaft and Wheel GT15

GT/VNT 15/17/18 Compressor Wheels		
Melett Part Number	Replacement OE Number	Description
1102-015-400	434812-1	Compressor Wheel
1102-015-401	702489-9	Compressor Wheel
1102-015-402	436132-3 703925-3	Compressor Wheel

VNT build sheets now available online at www.melett.com

New Catalogue and website

Have you updated your copy of our latest Melett CD Catalogue v3.0? The new software is self-loading and contains straight forward menus which let you see a summary of parts available from Melett by turbo model. The full catalogue is available to view and gives live links to the website for cross referencing and latest product updates. Contact Melett Sales for your free copy.



PRICE INCREASES NOT AT MELETT!!

'It has been very interesting to see all the price increases over the past 12 months blamed on material increases caused by China. We have experienced some increases but nothing like the levels claimed' explains Ian. 'Our customers were pleased to find that overall, our 2005 price list was actually lower than our 2004 price list and in 2006, we anticipate very few price increases and intend to leave most of the price list unchanged. We are able to achieve this because our volumes are increasing so this is allowing us to produce parts in more efficient batch sizes thus reducing production costs. This offsets any increases we are experiencing with material prices.'

Repair kits – Contents Explained

Melett offers 2 types of repair kits for each turbo model. Generally, the Minor kit contains all the parts necessary for a basic repair e.g. Journal bearings, thrust bearing, piston rings, O-Rings and any bolts that are usually unrecoverable. These are the parts which should always be replaced as a minimum. The Major kit will then contain the extra parts required for a full repair e.g. thrust collar and spacer, seal plate and most external bolts for comp cover and turbine housing.

Often the OEM kit contains parts which are easily reconditioned (e.g. clamp plates) or standard bolts which are purchased locally. Where a repair kit has identical contents to the genuine kit, our part number will cross reference and state 'replaces (OE Number)'. Where our kit does not identically match the OE kit but essentially will repair the same turbo models, our cross reference will state 'similar to (OE Number)'.

An economical alternative is to purchase parts individually – all Melett parts are available to purchase as single items. Full details of all kit contents and parts available are available in the catalogue or on-line at www.melett.com



The Devil is in the Detail

A term often used in Engineering Design because when something is almost right, it still won't work until you have taken care of every last detail.



Melett go a long way to ensure you can rely on our repair kits as much as you rely on the quality of OEM repair kits. An example of this is the seal plate screw for the Garrett GT/VNT 15-25 turbo. To the untrained eye, this looks like a normal screw you can buy from your local bolt supplier - but it isn't. These screws are fitted inboard of the seal plate O-ring so if a standard screw is used, it is possible for oil to work its way up the thread and leak into the compressor cover. To prevent this, the screw has a sharp feature under the head which digs into the seal plate creating the necessary oil seal. Our accurate replacements are made on special tooling produced to ensure our parts contain this important feature.



Another example of this extra detail is our K03/4 single oil feed journal bearings. Accurately replacing the genuine bearing, the Melett part is manufactured from the correct material and includes the internal scroll feature for improved oil flow (also available in ID -0.005" and -0.010" undersizes).

Not all features are necessary. For example, some detail on parts is produced to assist the automated assembly process rather than having any technical benefit to the part. These are not necessary for the aftermarket rebuilder so for economical reasons are often omitted from our replacement parts. It is only possible to make these decisions when you fully understand the technical function of every part produced.

Parts Bulletin

Are you on the list?



'I didn't know you did that!!' 'This is a phrase we hear all the time' says Patrick. 'When you have over 1500 parts in stock and fast moving development producing new parts literally every week, it is very difficult for our customers to know what is available.'

To keep you informed as new parts and repair kits become available, we send out regular New Parts Bulletins. The bulletins are sent by fax or email – if you would like to subscribe to this service, please contact the Sales team.

To help search by OE part number, our website has a easy to use cross reference search facility.



Patrick Lewin

NEW STAFF NEWS

Since the last newsletter, there have been some new staff appear at Melett and exciting news for existing staff. Many customers will be aware that Kulsum disappeared from the sales desk in July 2005 to get married to her fiancée Imran.

To replace her on the sales desk we welcome Patrick Lewin. Patrick has over 13 years experience in customer service and order processing – he is learning to ‘talk turbo’ very quickly and understands that at Melett, he needs to know the part beyond it’s part number.

LATEST PRODUCT RELEASES

TD04-L Shaft & Wheel



Now in stock – TD04-L Shaft and wheel. This wheel is fitted to the popular Volvo S40 range (49377-06####), the Subaru turbos (49377-04####) and Fiat Ducato/Iveco Daily (49377-07####).

In the past year, we have re-tooled for all our TD04 shafts to both improve quality and produce a more accurate replacement. Prices have also reduced through improved manufacturing efficiency.

These shafts compliment our popular range of replacement MHI compressor wheels.

K03 Shaft and Wheels

Now in Stock - K03 shaft and wheels – accurate replacements for the popular Audi /VW turbos on the 1.8T vehicles.



Melett Part No.	To replace KKK
1302-003-435	5303-120-5023
	5303-120-5008
1302-003-438	5303-120-5029

Oversize Bearings and Piston Rings

We are continuously adding to our already comprehensive range of oversize bearings and piston rings. Latest additions are oversize piston rings for RHB5, RHB6 and K27 and oversize bearings for K27, TV90-94 and HX55.



Turbine Housing K04



Now in stock – Turbine housings to fit K04-0001/6/8. Our part numbers are 1302-004-890 and 891 for the 2 shaft trims. Also in stock are the turbine housing for the popular K03-0005

Hitachi Repair Kits

We now stock a large range of popular Hitachi turbo repair kits with variations of both large and small journal bearings and large and small diameter thrust bearings.



For further information and pricing contact the Melett sales team

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