Tech Bulletins/Special Offers

PSA 1.6 Hdi Turbocharger Failure & Fitting Warning

ATTENTION: PLEASE READ THIS BEFORE FITTING THESE TURBOS TO YOUR CUSTOMERS VEHICLES

753420-5005S & 49173-07506 110 & 90 bhp

PSA 1.6HDi TURBOS, 2004- ONWARDS
The PSA 1.6HDi, DV6TED4 engine is a highly sophisticated low emission, high power diesel unit. It is used in many different applications Citroen, Ford, Mazda, Mini, Peugeot and Volvo.

Due to the engine being clean and powerful, it is designed to operate with high temperatures, which demands the very best lubricants. These lubricants must be maintained in peak condition and PSA have fitted an in-line oil filter to the turbo and an integral oil cooler/oil filter to this engine to ensure this.

However there is a drawback to this, reports from in the field indicate that if the engine has been operated with the oil level below normal limits, this may potentially cause a high concentration of carbon in the oil. This may then lead to blockage of the in-line filter, oil cooler and main oil filter, which will eventually bring on premature turbo failure.

The vacuum pump may also suffer from this same type of contamination. However, due to its high operating speeds (230,000 revs per minute) the turbo will usually be the first to show signs of damage. This can happen from 30,000 miles onwards if the oil level and correct oil change intervals/procedure have not been adhered to.

We have found that the carbon build up in this application is particularly difficult to remove. To try to eliminate the potential for further turbo failure the following must be undertaken by the garage, in addition to the normal recommended turbo fitting instructions:

TURBO OIL FEED PIPE & BANJO BOLTS MUST BE CHANGED.
OIL PUMP SHOULD BE REMOVED AND CHECKED.

SUMP MUST BE REMOVED AND OIL STRAINER (PICK UP) SHOULD BE CLEANED/REPLACED BEFORE RE-FITTING NEW TURBO TO REMOVE RESIDUAL CARBON/SLUDGE BUILD UP.

OIL COOLER AND FILTER ASSEMBLY SHOULD BE REMOVED AND CLEANED.
REMOVE CHARGE AIR COOLER, DRAIN OFF ANY OIL INSIDE AND CLEAN THOROUGHLY.
CHECK AND CLEAN ALL INLET AND OUTLET HOSES.
IF OIL HAS LEAKED FROM PREVIOUSLY DAMAGED TURBO OR ENGINE INTO EXHAUST, CHECK EXHAUST SYSTEM FOR CONTAMINATION/BLOCKAGE (CATALYST, DPF etc.)
REMOVE BRAKE VACUUM PUMP TO CHECK FOR DEBRIS/CARBON AND CLEAN AS NECESSARY.
FIT NEW OIL FILTER AND OIL.
CHECK FUEL INJECTOR GASKETS ARE NOT BURNT OR COMPROMISED. REPLACE AS NECESSARY
OIL FLOW MUST BE CHECKED:
FIT TURBO TO ENGINE LEAVING OIL RETURN PIPE OFF
INSTALL A LONGER OIL RETURN LINE AND FEED INTO SUITABLE CONTAINER
START ENGINE AND IDLE FOR 60 SECONDS, THEN SWITCH OFF ENGINE
MEASURE VOLUME OF OIL IN CONTAINER
60 SECONDS OF IDLE SHOULD PRODUCE AT LEAST 0.3 LITRES OF OIL.
REPEAT TEST TWO OR THREE TIMES TO CONFIRM OIL FLOW IS CORRECT
DURING THIS TEST, DO NOT ALLOW ENGINE TO RUN BELOW MINIMUM OIL LEVEL!!
VEHICLE SHOULD BE DRIVEN 20 to 30 MILES THEN THE OIL/FILTER REPLACED AGAIN.

Even after all the above has been carried out we cannot guarantee all carbon/sludge will be removed and you could still suffer a premature turbo failure.
We feel that due to the possibility of further turbo failures on this engine it is only right to inform you before you purchase a replacement turbo for your customer. Currently we are experiencing a 15% failure rate of units we supply for this engine.

Please feel free to speak to our engineers or sales team if you would like to discuss this issue further.
Any turbo returned under warranty will be subject to our standard terms and conditions.
We would also like to assure you that this is the only engine we have experienced these failure rates with. We as a company will always inform you of any ongoing issues to allow you to make the right judgement call for what you deem correct for your business.