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PRECISION ENGINEERED
TURBOCHARGERS & PARTS

OIL CONTAMINATION

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What is oil contamination

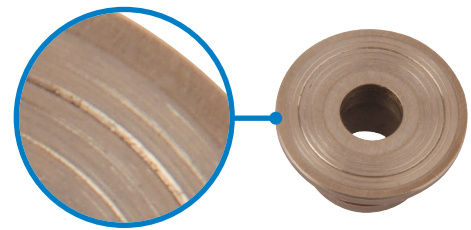
Oil is very often overlooked as a critical component. However, clean filtered engine oil is a major requirement and a necessity for all turbochargers.

Causes of oil contamination

- If the oil filter is damaged or a poor-quality oil filter is used
- Excess moisture can lead to premature oil degradation, increased corrosion and increased wear
- High carbon build up present in the engine can quickly contaminate new oil
- Contamination of new oil whilst servicing (accidental)
- Unchanged oil containing detergent deposits can become very abrasive to the turbos precision components
- Engine wear, which can leave swarf deposits in the oil
- Degrading oil caused by excessive temperatures or extended service intervals
- Internal engine leaks, such as fuel or coolant mixing with oil supply
- Residue from blasted components, during the remanufacturing process
- Particles from carbon build up in oil feed pipes

Signs of oil contamination

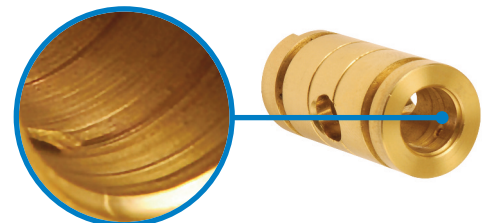
- Scoring to thrust components
- Scoring to journal bearings
- Scoring to journal bearing diameter of shaft and wheel
- Smell of fuel in the oil
- Particulates in the oil



Scoring to thrust parts



Scoring to journal bearing diameter on shaft & wheel



Scoring to journal bearings

Preventing turbo failure caused by oil contamination:

- Using new oil and filters helps to reduce the risk. We advise that filters recommended by the engine manufacturer are used when refitting the turbo
- Replacing or cleaning the oil inlet pipes and in-line micro filters helps to prevent carbon deposits entering the oil flow to the bearings
- Take care when changing oil during servicing to prevent accidental contamination
- Check for engine wear that could leave swarf deposits
- Check the vehicle is up to date with services



TECH TIP - If the original cause of failure is not identified it is likely the same type of failure will occur on the remanufactured turbo. Catastrophic damage to the bearing systems can occur within seconds of the turbocharger commencing operation.

For further information on this or other topics, visit www.melett.com/technical or contact our team via melett_sales@wabtec.com