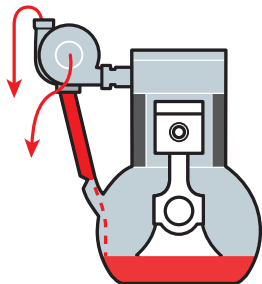




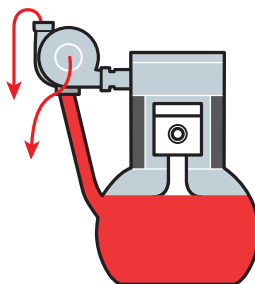
OIL LEAKS

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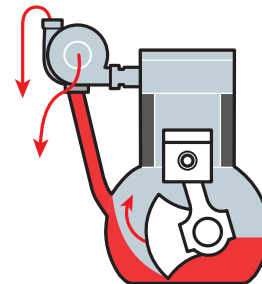
Examples of how oil leaks can occur:



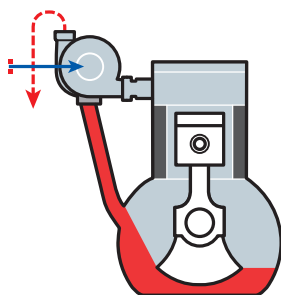
If there is a kink, bend, twist or partial blockage in the oil return pipe, this will cause the oil pressure to build up in the bearing housing, resulting in leaks from both turbine and compressor ends.



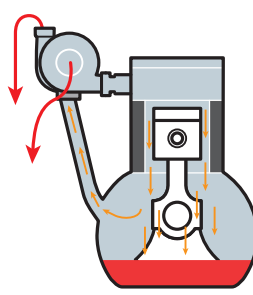
If the oil level is too full there will be nowhere for the oil to flow, causing a build-up of oil pressure in the bearing housing. This will cause oil to leak from both the turbine and compressor ends.



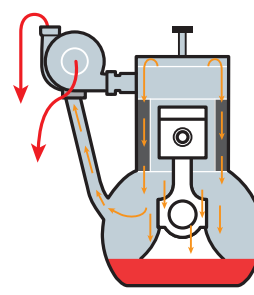
If the oil level is higher than specified by the engine manufacturer, this can cause oil to be forced back up to the oil return pipe with the motion of the crank, restricting the flow. This will cause leaks from both the turbine and compressor ends.



If there is a loss or increase of pressure in the compressor end or turbine end, this will cause oil leak in either the turbine or compressor end.



Piston ring blow by



Crank case blow by

'Piston ring blow by' and 'crank case blow by' cause the same effect, they increase the pressure in the crank case. This affects the oil flow to the turbo at the correct rate needed and acts as a restriction to the oil feed pipe, causing the turbo to leak oil in either of the turbine end or compressor end.

Preventing future oil leaks:

- Ensure air and oil drain systems are clear from blockages or restrictions
- Check the exhaust system to make sure there are no leaks present
- Do not use silicone on oil gaskets as it can easily become detached and block oil passages Ensure
- DPF (diesel particulate filter) and Catalytic converter are free of blockages
- Use the correct gaskets and o-rings
- Only use the correct standard of turbine housings and compressor housings
- Check for correct oil levels and pressure



PLEASE NOTE - Oil leaks can occur on VSR (high speed) balancing machines as the ambient pressures required to create the seal are not present as no housings are used. This can then force out oil from both the compressor end and turbine end giving the impression of a leak. This is unlikely to occur when the replacement turbo is fitted to the engine.

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