OFP IMPORTANCE & ISSUES

In many cases, the OFP's malfunction is the root cause for severe turbo failures. It is an area where oil flow restrictions can easily occur.

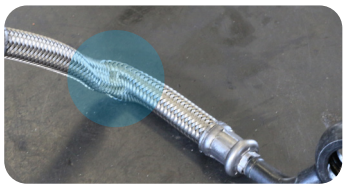
The OFP's relatively thin diameter makes it easy for clogs to build up inside. Especially, by the lubricant degradation (sludge, particles formation) or when the line is located close to the exhaust lines/ manifold. The high temperatures generated by the gases flowing through the exhaust system expose the oil stream inside the feed line to a high thermal stress. This leads to the formation of solid particles inside the pipe due to oil coking and carbonizing.

KEEP IN MIND

Appropriate lubrication is the key condition for any turbo to operate. The OFP is considered to be an internal part of the lubricating system of the Turbo.

Any lubricant flow restrictions within the OFP will always lead to improper turbo lubrication, thus will instantly provoke its severe, unrepairable failures and abnormal operation of the engine.

OFP COMMON FAILURES



Pipe Deformation > Oil supply disturbance: Oil feedline deformation caused by careless installation. The line is tight but the deformation caused oil leakage, thus shortages in lubricant supply to the turbo.

Severe oil contamination > flow disturbance: Severe oil contamination (sludge/carbonizing) caused oil feed line restrictions - visible on the banjo fitting, as the severe contamination built up inside of the pipe.

Lack of heat protection > flow disturbance: torn, deteriorated heat protection shield of the OFP may lead to inner flow restriction due to oil carbonizing and cause severe contamination to build up inside of the pipe.

OUTCOME:
Insufficient Turbo lubrication

Broken shaft caused by a lack of lubrication. The high rotation speed and frictions within the moving parts have caused the temperature to increase extremely, the shaft to warm up, and ultimately break by seizing.

The surface of the turbo shaft is black and carbonized. Insufficient oil supply have caused overheating, thus making the steel color change. The blueish-to-yellowish color temperature is a heat tint caused by the overheating of the steel shaft.

RECOMMENDED BY EXPERTS

WHEN FITTING A NEW TURBO

Always install new OFP to avoid critical failures of the newly installed turbo – reuse and cleaning of the OFP is often impossible due to design with many curves.

Once the turbo is installed, remember to check the oil pressure delivered on the OFP (2-4 bar) of the engine.

REGULAR SERVICE AND MAINTENANCE

Inspect the engine lubrication system on a regular basis in order to control if is in a vital condition and oil is distributed freely across all engine components, specifically to and from the turbo.

Ensure that the correct oil type, volume and quality is used for the engine.

Observe the oil change intervals or change the oil more frequently.

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