

TECHNICAL REPORT

Assembly and maintenance of
the turbocharger oil feed pipe
in PSA engines 1.4-1.6 HDI

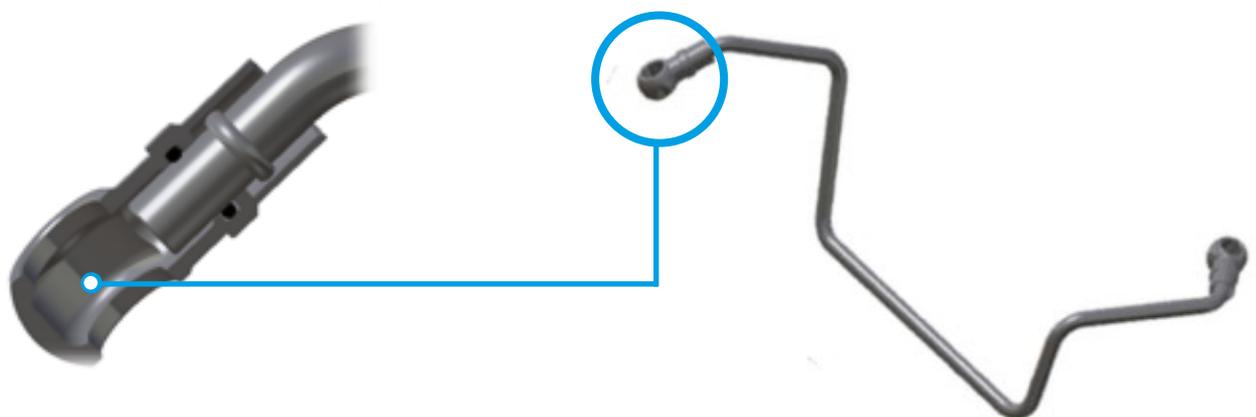
SCOPE

Inform the customer about the **precautions** that must be considered in the assembly of the oil feed pipe and the maintenance on other components in the engine for its proper functioning.

DESCRIPTION

The family of engines 1.4 and 1.6 HDI of PSA Group uses an **oil feed pipe** to transport oil from the engine block to the turbocharger with some **special characteristics**. This family of oil feed pipes has at its end **2 mobile connectors** and not welded as is usual.

The sealing in this case **is created by a special o-ring** which resist to high temperatures and is housed in the connectors keeping the sealing against the surface of the tube. This system facilitates the assembly process because provides movability at the ends.



For the correct assembly of the oil feed pipe and the maintenance of the correct lubrication of the turbocharger, the following points should be followed:

- When replacing the oil feed pipe, it's very important to **ensure the cleaning of the oil circuit**. Therefore, its advisable to replace elements such as the oil pump, filters which sucks oil from the crankcase, oil filter, etc..
- Carry out the assembly without forcing the oil feed pipe in the entire process. If the oil feed pipe its forced, the inner O-ring could be damaged leading to a bad position to ensure sealing. Disassemble everything that is necessary for a stress-free assembly for the pipe.



- **Replace the fitting with filter by one without filter**. Its recommended make this point in engines with high number of kilometers, because the oil contamination could block this filter, and with it the passage of oil to the turbocharger.



Filter Fittings



None Filter Fittings

- Apply the corresponding tightening process.

TIGHTENING: 25-35 Nm in both ends.

- In internal combustion engines, where **strong explosions** are generated inside the cylinders it produced a **high level of vibrations**. The design of this tubes doesn't have intermediate fasteners and is important to take it into account because the sealing its produced through an o-ring which would be directly affected by these vibrations, producing premature wear and therefore lack of sealing.

Therefore, it's very important to **check all those elements** that could produce or transmit excessive vibrations in the engine such as:

- **Silent-blocks** which supports the motor.
- **Injection system**.
- **Sensor** of Crankshaft position, detonation, fuel pressure, intake pressure.
- Clutch and dual-mass **flywheel**.
- **Transmissions**.