JP·Group a/s
AUTOMOTIVE

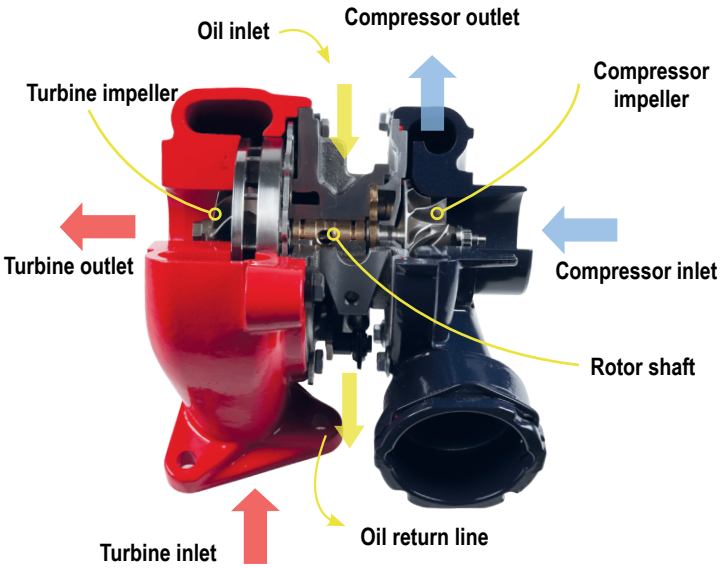
QUALITY FROM DENMARK

ADDITIONAL SHEET FOR TURBOCHARGER

BEFORE INSTALLATION

In principle, the following points should be observed before installing a new turbocharger:

- Any damage that has led to the failure of the turbocharger must be eliminated!
- The oil inlet- and drain lines must be checked to ensure it is unobstructed, and be replaced if necessary
- The following parts should be checked, among other things: the air intake line, air filter, charge air cooler, air compressor, catalytic converter, and the exhaust manifold
- Pay attention to possible residues due to the defective turbocharger and remove them
- Liquid sealants are not allowed to be used either in the oil lines or in other places when changing a turbocharger
- Make sure the right replacement parts are available
- Clean the sealing surface
- Make sure that flanges and threads are free from damage or wear
- The car manufacturer's specifications on installation and changing of various parts are binding! (There are vehicles in which other parts such as the oil sump, oil dipstick, etc. have to be changed.)



DURING INSTALLATION

What should be taken into consideration during installation?

- The oil and the oil filter / air filter should always be replaced
- Before attaching the oil supply line, fill the turbocharger with engine oil / initial filling additive through the oil inlet hole while turning the rotor slightly
- Comply with the tightening torques according to the specifications of the engine- or vehicle manufacturer
- Remove all dirt particles from the previous damage

POST-INSTALLATION

What should be taken into consideration after installation?

- Allow the engine to idle for 2-3 minutes before increasing engine speed
- In the meantime, check all assembled parts for leaks and tightness
- After successful installation of the new turbocharger, all inspection intervals specified by the car manufacturer should be observed in order to ensure the new turbocharger has a long service life

PLEASE NOTE!

This document is for support but does not supersede the car manufacturer's specifications or the state of the art. Turbochargers should only be replaced by trained specialist personnel.

Installation movie

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DIAGNOSIS-MATRIX

With this matrix you can quickly locate the causes of damage or fault in the turbocharger.

Important:
Do not remove the old turbocharger until the causes of the damage or fault have been eliminated. Only then can the proper function of the new turbocharger be permanently ensured.

Type of fault / Possible causes	Defective compressor-/turbine impeller	Low output / charging pressure is too low	Charging pressure is too high	Black smoke	Blue smoke	Turbocharger generates noise	High oil consumption	Oil leakage from the compressor	Oil leakage from the turbine
Air filtration system is dirty		●		●	●		●	●	
Intake-/pressure hose is deformed or leaking		●		●		●			
Flow resistance in exhaust system is too high / turbine leakage		●		●	●	●	●	●	
Oil supply- and drain lines are blocked and/or deformed					●		●	●	●
Crankcase breather system is blocked and/or deformed					●		●	●	●
Turbocharger housing is sooty or silty					●		●	●	●
Fuel system / injection system is defective or set incorrectly		●	●	●					
Valve guide, piston rings, engine- or cylinder liners are worn down / increased blow-by		●		●	●		●	●	●
Contamination of the compressor or charge air cooler		●		●	●	●	●	●	
Charge air pressure regulating flap/valve does not close		●		●					
Charge air pressure regulating flap/valve does not open			●						
Control line to the regulating flap/valve is defective		●	●						
Piston rings are not sealing					●		●	●	●
Turbocharger bearing damage	●	●		●	●	●	●	●	●
Damage on compressor and turbine due to foreign object	●	●		●			●		
Exhaust gas leakage between turbine outlet and exhaust pipe							●		
Exhaust manifold cracked, missing/loose gasket		●		●			●		
Turbine housing / flap damaged	●	●		●		●			
Deficient oil supply to the turbocharger	●	●		●		●			

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