

## **Regulations and guidelines for the installation of turbochargers.**

1. The installation of the turbocharger must only be performed by trained professionals. Please be aware that improper installation of a turbocharger or any unauthorized modifications can lead to damage to the turbocharger and/or the engine. It is imperative to strictly follow the engine manufacturer's repair manual and the following guidelines.
2. Before installing the new turbocharger, you should inspect the entire engine environment for any damage or alterations. Determine the root cause of the faulty turbocharger and make sure to address it accordingly.
3. The engine ventilation system must be thoroughly examined in every case, as pressure fluctuations in the crankcase can result in oil loss from the turbocharger, leading to turbocharger failure. Additionally, all oil-carrying lines and the engine's oil pan should be inspected for contamination and sludge buildup and cleaned as necessary. Furthermore, perform a filter and oil change to prevent any damage.
4. The area of the intake duct and the exhaust manifold on the engine should also be inspected and cleaned. Pay particular attention to the manifold and compensators for any damage. It is crucial to ensure that no foreign objects can detach within the entire piping system, as this can lead to damage during operation.
5. The complete air pathway between the turbocharger and the engine, especially the intercooler, should be checked for oil residues, which must be removed. If necessary, the intercooler should be replaced. Failure to do so can lead to engine damage due to uncontrolled over-revving.
6. Mandatory replacements include the oil supply line and its adjacent components (hollow bolts, oil filter, etc.), while the oil return line should be inspected and cleaned, and if in doubt, replaced as well. **IMPORTANT:** Never use liquid sealants during the installation of the oil line!
7. Prior to installing the turbocharger, fill the oil inlet opening with fresh motor oil while rotating the rotor shaft several times. This ensures proper lubrication during the turbocharger's initial operation.
8. During assembly, ensure that only new flange gaskets are used. All flanges and threads must be free from damage and signs of wear. Use only bolts that meet the manufacturer's specifications in their specification. Tightening torques must be strictly adhered to, in accordance with the vehicle manufacturer's guidelines, under all circumstances.
9. After the turbocharger has been installed, please start the engine and let it idle for approximately 60 seconds. Before putting a load on the engine, it must have built up the necessary oil pressure. If this does not happen, it can lead to damage to the engine and/or turbocharger. After the system is operational, it is important to once again inspect all air, gas, and oil lines for leaks.

If all the aforementioned points have been followed, and issues such as reduced performance, oil leakage at the turbocharger, etc., still persist after the turbocharger installation, it does not necessarily mean that there is a problem with the turbocharger itself. Often, the root cause lies in the peripheral components and not in the turbocharger. Recheck all components within the system for leaks and/or functionality. If you suspect an issue with the turbocharger, we advise against installing another one until our technicians have reviewed the test results.

**WARNING:** During and immediately after operation, there is a risk of burns from the engine and turbocharger. Do not touch either until their surfaces have cooled down.

**Conditions for product warranty:**

1. Obvious defects must be reported immediately.
2. Warranty for product defects is void if the above installation instructions are not followed or if an incompatible or non-matching turbocharger is installed.
3. After approximately 15-20 operating hours or a mileage of 1,000 km, all connections must be rechecked for tightness and integrity.
4. Returns for product warranty must be clearly marked as such. Unmarked items will be disposed of as used parts and cannot be traced back.
5. To process a product under warranty (guarantee), we require both the purchase invoice and the proper invoice from the professional workshop for the installation. All relevant details must be clearly visible in the documentation.