Warranty Conditions

When purchasing a turbocharger from our store, you receive a quality warranty for a period of 24 months with no mileage limit. For the warranty to be valid, all recommendations contained in the warranty certificate must be followed, and the installation must be carried out by a qualified person. Correct diagnosis, installation in accordance with the instructions, and proper operation ensure a long service life for the turbocharger. Below, we present the general warranty conditions and the necessary diagnostics required when servicing the vehicle.

General Warranty Conditions

The warranty is valid only with proof of purchase. The product has a 24-month quality warranty, counted from the date of sale.

The Customer has the right to demand a price reduction or to withdraw from the contract, unless the Seller promptly and without undue inconvenience to the Customer replaces the faulty product with a defect-free one or rectifies the defect. This limitation does not apply if the product has already been replaced or repaired by the guarantor, or if the guarantor has neither replaced the product with a defect-free one nor rectified the defect.

Due to the nature and specification of the products, the warranty does not cover damage resulting from:

- Unauthorised repairs, alterations, or design changes carried out by the user or other unauthorised persons;
- Mechanical, thermal, chemical damage or intentional damage to the product;
- Damage resulting from failure to comply with the rules of proper operation, or the use of the product contrary to its intended purpose or parameters;
- Items independently selected, altered, repaired, or improperly assembled.

The warranty does not exclude, limit, or suspend the Buyer's rights resulting from the provisions concerning the legal warranty for defects in goods sold. The warranty is valid provided that all recommendations contained in the warranty certificate are followed, the installation is carried out by a qualified person, and the certificate is signed by the owner and the person installing the component in the vehicle. In the event of a repair due to hidden material defects, the warranty only covers the parts included in the repair costs - this also applies to repairs made by replacement.

In the case of an unjustified complaint, servicing the turbocharger after verification disassembly may be treated as a paid service outside the warranty.

⚠ ATTENTION! ⚠

Before starting the newly installed turbocharger, completely eliminate the fault that necessitated the repair or replacement of the component. All installation and diagnostic work must be carried out at a specialist workshop.

Diagnostics

Cause of replacement and the associated mandatory scope of work during turbocharger installation:

1. Increased Radial and Axial Rotor Play (wheels rub against housings / worn bearings)

- clean the intake and exhaust systems;
- replace the air filter element;
- clean the engine crankcase and the compartment under the rocker cover;
- check the sealing of the injector seats / concerning those installed under the rocker cover;
- clean or replace the oil pump filter;
- check the condition of the oil pump along with the relief valve;
- clean and check the condition of the oil sump - replace with new in case of dents;
- replace all oil supply and drain lines, as well as connecting bolts;
- replace the oil filter element;
- check the turbocharger's condition after approximately 1000 km and during oil changes;

2. Oil Leaks from the Turbocharger (without increased rotor play)

- improve the engine breather filter system;
- replace the air filter element and check the efficiency of the oil drain from the turbocharger;
- check the extent of engine blow-by (piston system) - eliminate any causes;
- inspect and, if necessary, adjust the oil level;

3. Mechanical Damage by Foreign Material: compressor wheel, turbine wheel (rotor)

- find and eliminate the cause;
- clean and inspect the intake and exhaust systems;
- replace the air filter element;

4. Abnormal Turbocharger Noise (without increased rotor play)

- eliminate leaks in the intake or exhaust system;

5. Issues with Correct Boost Operation (variable geometry problems / lack of power / entering limp mode)

- check the components responsible for the correct control of the actuator;
- check the flow rate of the catalytic converter / Diesel Particulate Filter (DPF/FAP);
- check the operation of the fuel injection system.

If a malfunction of the turbocharger is found (in case of oil leaks or abnormal noise), check the possible causes mentioned in *diagnostic* points 2 and 4. If a defect is found in the turbocharger, its operation must cease, and the seller must be contacted before its removal.

Following the guarantor's decision to remove the turbocharger from the vehicle, the complaint will be processed immediately after the turbocharger is delivered to their headquarters or point of sale, no later than 14 days.

⚠️ ATTENTION! ⚠️

More than **90% of turbocharger complaints result from mechanical damage.**
The most common causes are:

- **a clogged DPF,**
- **lack of proper lubrication.**

👆 Such damage automatically results in a negative warranty decision! 👆

Below you will find examples of the most common damage and their origins.

Mechanical Damage / Basis for a Negative Warranty Decision

1. Damage by Foreign Material

Bent or chipped rotor blades or compressor wheels are damages caused by a foreign object that entered the intake or exhaust housing.

Possible Causes:

- Nuts/bolts/stones/sand/hard object left in the air boost system (induction system),

- Broken engine components,
- Late air filter replacements,
- Cracked connection elements or other objects that entered the device's interior.

Action Required

The air inlet channel and the exhaust manifold must be inspected for foreign bodies. Find and eliminate the cause of the damage. Inspect and clean the intake and exhaust systems. Replace the air filter element.

2. Oil Pressure Shortage (Lack of Lubrication)

A prolonged lack of oil pressure burns and damages the surface of the bearings and the turbocharger rotor. It also causes thermal discolouration of these components.

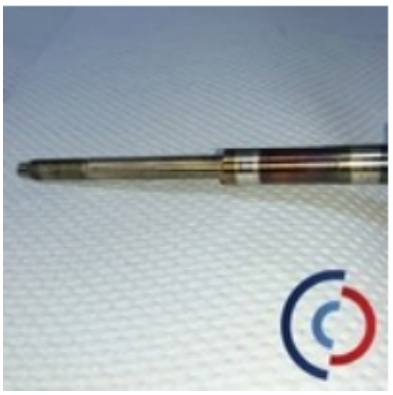
Possible Causes:

- Damaged oil pump,
- Blocked, broken, or bent turbocharger lubricating line,
- Low oil level in the oil sump,
- Poor functioning of the lubrication system,
- Long periods of driving the vehicle on steep terrain.

Action Required

Check/replace the oil pump along with the relief valve. Check the lubrication system together with the line responsible for lubricating the turbocharger. Clean and check the condition of the oil sump - replace with new in case of dents.





3. Interruptions in Oil Supply

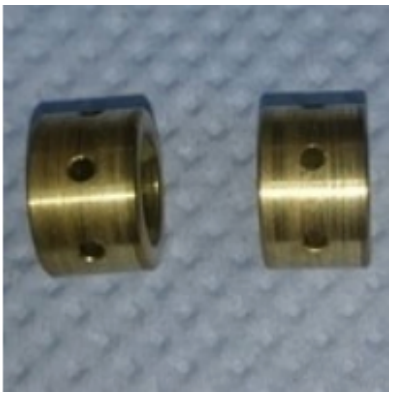
Repeated short interruptions of 4-5 seconds can lead to burning and polishing of the bearing surfaces.

Possible Causes:

- Consequence of incorrect oil and oil filter replacement (turbocharger dry start),
- Replacement of the turbocharger without pre-filling it with oil,
- The vehicle has not been used for a long time,
- Low oil pressure due to poor lubrication system function,
- Incorrect engine startup after turbocharger replacement or reconditioning,
- Oil contamination (e.g., fuel or glycol).

Action Required

Check/replace the oil pump. Check the lubrication system together with the line responsible for lubricating the turbocharger. To avoid damage after a long period of vehicle disuse, the engine should be started for a few seconds, switched off, and the procedure repeated several times to completely prime the lines and the turbocharger itself with oil and to bleed the air from them.


4. Contaminated Oil

Dirty oil causes deep scoring (or scratches) on the turbocharger bearings.

Possible Causes:

- Blocked, damaged, or low-quality oil filter,
- Engine wear and the possible appearance of its damaged components,
- Faulty oil filter relief valve,
- Low-quality engine oil,
- Engine oil not changed for too long.

Action Required

This type of damage can be avoided by using and regularly changing high-quality oils and filters. Remember to change them regularly in accordance with the manufacturer's recommendations or even more frequently!

5. Variable Geometry Mechanism Damage

Due to oil carbon deposits on the variable geometry, the car may enter limp mode and experience a significant loss of power.

Possible Causes:

- Damaged/faulty Diesel Particulate Filter (DPF/FAP) or catalytic converter,
- Damaged injectors,
- Excess oil from a leaking cylinder head, valve stem seals, or piston rings,
- turbosprężarki, Faulty actuator or turbocharger controller,
- Habitual driving of the car over short distances at low speeds.

Action Required

The cause of the damage must be correctly diagnosed and rectified. In 99% of cases, it will be one of the aforementioned causes. To avoid failure of the variable geometry mechanism, we

advise checking: the DPF, injectors, and oil pressure. We recommend regular longer drives, during which the mechanism has a chance to heat up and get rid of carbon deposits.



6. Overheating

Higher temperatures transferring from the turbocharger's exhaust housing to the core assembly contribute to oil burnout and cause corrosion of the component's bearings. Excessively high exhaust gas temperatures or switching off the engine too quickly after intensive operation cause the accumulation of carbon resulting from the burning oil. The components most exposed to damage are primarily the rotor's sealing ring along with its location (turbine shaft groove) and the turbo bearing. Carbonised oil also blocks the oil drain, and its accumulation causes friction, which consequently leads to bending or cracking of individual parts of the device. Overheating can also lead to engine self-ignition.

Possible Causes:

- Poor quality engine oil,
- Switching off the engine too quickly after intensive operation,
- Blocked or worn air filter,
- Air and exhaust blow-by,
- Infrequently changed engine oil,
- Damaged or faulty injectors,
- Faulty lubrication system,
- Faulty oil drainage system (incorrect engine crankcase ventilation).

7. Oil from the Intake System

Engine oil that enters the turbocharger from the intake side most often leads to the accumulation of oil coke at the turbocharger rotor seal. The accumulated burnt oil causes wear of the bearing and the rotor groove (location of the rotor sealing ring), which consequently leads to that ring being "blown out" (expelled).

The Intake System - The Engine's Lungs

The intake system is responsible for supplying the engine with air (in direct fuel injection units) or an air-fuel mixture (in indirect injection engines). Real problems arise when engine oil starts to accumulate in the intake system. It should never be there!

Faulty Breather (Crankcase Ventilation)

A frequently overlooked cause of oil residue in the intake, even by mechanics, is a malfunctioning crankcase breather. The task of the breather is to ventilate the crankcase. Along with the air drawn out of the crankcase, engine oil (small amounts) is also sucked in. The problem is that after a few years of operation, the oil separator located in the breather stops working correctly and allows air along with oil vapours into the turbocharger's intake pipe. As a result, the compressor forces air and oil into the intercooler pipe.

Worn Piston Rings / Engine Blow-by

The presence of oil in the intake system can also be the result of worn piston rings, which causes oil to be forced into the intake system. If the car's engine actually requires piston ring replacement, it is worth checking its other components (cylinder heads). It may turn out that shortly after replacing the rings, the engine will have to be dismantled again to eliminate another fault.

Too Much Oil in the Engine (Overfilling)

The cause of oil entering the intake system can also be an excessive amount of oil in the engine. Workshops often overfill the engine with oil, typically due to the short time they can dedicate to the vehicle. Before the oil drains completely from the engine, they fill it with the amount of oil recommended by the manufacturer. It is at this point that the risk of oil appearing in the breather, which will supply it to the intake system, increases dramatically.