

**CR TURBOS**

**INSIDE  
PERFORMANCE**



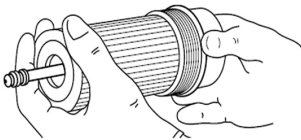
# TURBO INSTALLATION



**STEP 1:** It is important that during the whole installation process, you prevent dirt or debris from entering any part of the turbo.

Any dirt or debris entering the turbo may cause catastrophic damage due to the very high speed of operation (up to 300,000rpm).

Use New Oil Filter



**STEP 2:** It is recommended that you use new air, oil and fuel filters and clean engine oil to the engine or vehicle maker's specification.

When installing the new oil filter, *if possible*, fill it with clean, fresh engine oil. Also, if it is accessible, back-fill the pressure line from the oil pump to the filter. This is particularly important on high mileage engines, where the oil pressure line may empty during oil changes!

Clean Air Filter and Housing



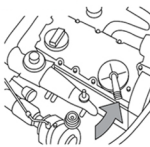
**STEP 3:** The air filter and its housing must be completely clean and free from any debris.

Inspect Air Hoses



Before installing the turbo, ensure that all air hoses connected to the turbo are totally clean and show no sign of any damage.

Clean Engine Breather System



**STEP 4:** Clean the engine breather system (Positive Crankcase Ventilation system) and ensure that it functions properly.

Any blockages or malfunction may cause high crankcase pressure and lead to oil leakage from the turbo into the inlet and exhaust systems.

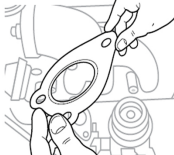
Clean Flange Surface



Remove any old gasket material from the exhaust manifold and pipe.

The surfaces of the flange must be clean and have no damage. Then remove plastic or foam blanking plugs from the turbo.

Use Correct Exhaust Gaskets

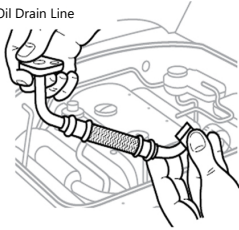


**STEP 5:** Position the turbo onto manifold or engine block using the correct new gasket or O ring, and then reconnect the exhaust pipe.

Tighten all nuts and bolts.\*

# TURBO INSTALLATION

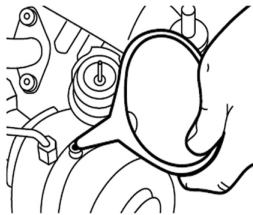
Install Oil Drain Line



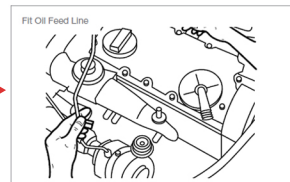
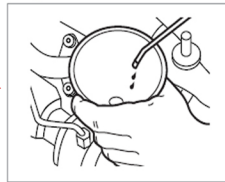
**STEP 6:** Next, install oil drain line to the turbocharger.

*Pay special attention to oil feed and drain lines, which must be totally clean and have no damage to ensure unrestricted oil flow. Make sure that flexible hose liners have not collapsed internally and that the oil feed line is not too close to source of heat which may have damaged the oil feed line internally.*

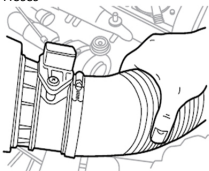
Fill Turbocharger with Oil



**STEP 7:** Pour new engine oil into the oil inlet hole of the turbocharger. Next, fit the new oil feed line.



Install Air Hoses



**STEP 8:** Install inlet and outlet air hoses to turbocharger compressor housing.

Make sure that the connections are airtight and hose clamps are correctly tightened.\*

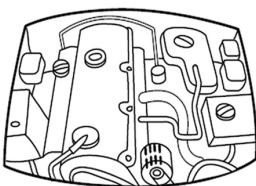
Prime Oil Feed



**STEP 9:** Crank the engine for 10 -15 seconds without starting the engine.

If possible, disable the fuelling/ignition or use compression test mode to slow this. This helps to prime the oil feed to the turbocharger by filling the oil pressure lines, oil filter and turbo with oil before start-up. Important Note: As soon as the engine starts, the turbo will run at high speed and a lack of lubrication in these vital first few seconds can destroy a brand new turbo.

Inspect Engine for Leakage



**STEP 10:** Then start the engine, and let it idle for 3 to 4 minutes to allow for proper inspection of oil, gas and air leakage.

If any leakage is detected during engine start up, fix the issue immediately.

**Stop the engine and re-check engine oil level.**

Oil level should be between the minimum and maximum mark on the dipstick - it is important to make sure that oil level is not above the point where turbo of drain pipe connects to the engine or this may lead to oil leakage from the turbo into the inlet and exhaust systems.

# WARRANTY CLAIMS

All turbochargers supplied CRturbos are warranted to be free from defects in workmanship and materials and fit for purpose.

- 1 - All INSIDE / CR turbos remanufactured turbochargers carry a **24 months warranty from the date of supply, with an upper limit of 50.000kms in service**, provided that the turbo has been fitted and serviced in accordance with the vehicle manufacturers, and this manual fitting instructions.
- 2 - INSIDE / CR turbos do not regard any warranty period above 24 months. Turbochargers incorrectly built will fail long before 24 months from fitting. Failure after this period will invariably be caused not by faulty manufacture, but by circumstances outside the control of the original turbo build. However we are happy to assist in the resolution of the problem and help to find the causes of failure.
- 3 - **INSIDE / CRturbos warranty is only valid if the car has been mapped and setup by td5inside / performance Inside.**
- 4 - Proof and date of purchase of turbocharger and Inside remap will be required before any claim can be made under the Warranty.
- 5 - The Supplier Warranty is limited to the **repair or replacement of the turbocharger** and will be carried in the maximum period of 15 days.
- 6 - No liability will be accepted if the turbocharger boost or other setting is **outside the figures recommended and preset** by INSIDE / CR turbos.
- 7 - If you wish to make a claim under the supplier Warranty **please email [info@td5inside.pt](mailto:info@td5inside.pt) under the subject warranty** claim so we can proceed accordingly asap.
- 8 - Please read this installation manual carefully. **Installation procedure must be followed or warranty is void.**