

# Installation guide

PLEASE READ THIS BEFORE FITTING THE TURBOCHARGER:

Failure of a turbocharger can be caused by external influences and not faulty turbocharger components. In particular residual engine carbon/sludge or any foreign object penetrating the turbocharger and damaging it. Other causes can be insufficient oil supply, oil contamination, over speed, and excessive temperature.

To avoid these problems please follow the installation guide lines below.

- Turbocharger oil feed pipe & banjo bolts must be changed
- Oil pump should be removed and checked
- Sump must be removed and cleaned.
- Check that engine has latest specification sump and dipstick.
- Oil strainer (pick up) must be removed and replaced due to residual carbon/sludge build up
- Oil cooler and filter assembly should be removed and cleaned
- Charge air cooler to be removed, cleaned thoroughly and any oil inside drained off
- Inlet and outlet hoses to be checked for damage and cleaned
- Exhaust system to be checked for contamination/blockage (Catalyst, DPF etc.)
- Vehicles with DPF: carry out static regeneration according to manufacturer's guidelines
- Brake vacuum pump to be removed and checked for debris/carbon - clean as necessary
- New oil and air filters and oil to be changed
- Replace all turbocharger gaskets do not use sealing material
- Oil drain pipe checked for blockage/restrictions and cleaned as necessary
- Oil flow must be checked.
- Fit turbocharger to engine leaving oil return pipe off
- Install a longer oil return line and feed into suitable container
- Disable ignition, crank engine for 15 seconds, twice, this will insure oil flow
- Start engine and idle for 60 seconds, then switch off engine
- Measure volume of oil in container - 60 seconds of idle should produce at least 0.3 Litres of oil
- Repeat test two or three times to confirm oil flow is correct
- During this test, do not allow engine to run below minimum oil level!!
- Vehicle should be driven 20 to 30 miles then the oil/filter must be changed and the filter in the banjo bolt removed and cleaned or replaced.
- Advise oil/filter are changed at 3000 mile intervals

When removing Turbo from box, be careful a Turbo can be heavy, use housing, do not lift from box using the Actuator, Rod, or Hose, you may damage the Turbo.

