



OWEN DEVELOPMENTS

Performance and OEM Turbocharger Fitting Instructions

IMPORTANT: PLEASE READ BEFORE FITTING YOUR TURBOCHARGER

To obtain optimum performance and to reduce the possibility of damage or failure of the turbocharger, please follow these simple guidelines when installing the unit:

- With the fitment of any new turbocharger, it is essential to change the used engine oil and filter.
- It is recommended to fit a new oil feed pipe, to flush the oil return pipe and if necessary, the intercooler, thoroughly.
- The optimal amount of oil for a ball bearing turbocharger is between 3 and 4 bar of oil pressure. When excessive oil is being supplied to the turbo as a result of higher oil pressure, an oil restrictor or preferably an oil pressure regulator can be used. Please call for a recommendation if you feel a restrictor is required.
- Non-standard parts, such as a brace, may be required in some applications.
- Ideally the oil drain pipe used will: be equal to or larger than the turbocharger's oil exit diameter of 13.5mm, protrude a straight 6" from the turbocharger towards the ground and return to the engine at a maximum 45°. If all are not met an oil scavenge pump may be required.
- In cases that the turbocharger has a water-cooled bearing housing; water must be run to and from the turbocharger.
- Prevent the engine from starting, and crank the engine until oil flows to and out of the turbocharger. On some vehicles it can take up to 1 minute for oil to reach the turbocharger. The oil drain can be temporarily disconnected to witness this.
- Once an oil supply is confirmed, start the engine and always allow the engine to idle for at least 2 minutes.
- Finally check for any leaks of exhaust gas or fluid before a road test.
- If the turbocharger is an OEM replacement and not a performance upgrade; install the turbocharger using the data for the appropriate workshop manual.

Failure to follow these instructions may cause permanent damage to your new turbocharger, which will not be covered by any warranty.

The adjustments on this turbocharger are set for its intended use. You should not, under any circumstances, undertake any other adjustments.

OEM Replacement Turbocharger Information:

Warranty

All OEM replacement (non-competition/non-performance upgrade) turbochargers carry a 12 month or 12,000 miles (whichever occurs first) warranty from the date of invoice and are subject to the above fitment precautions being met. Turbochargers returned for warranty purposes must not be dismantled prior to the claim and supporting information must be provided.

Please contact us on 01865 821062 and request a Warranty Failure Report Form, which can be posted or emailed to you. Please fully complete the report form and return with the turbocharger. Technical staff will be unable to discuss the turbo with you until this has been received.

All warranty claims are subject to our inspection and analysis test procedures to determine the cause of failure and warranties will be issued on the sole basis of our warranty test results and findings.

Competition/Performance Upgrade Turbocharger Information:

Disclaimer for Warranties

This part is sold "as is" without any warranty of any kind. All implied warranties, including all warranties of merchantability of fitness for a particular purpose, are excluded. Purchaser acknowledges that no representations have been made regarding this part, including but not limited to any representations as to its quality or performance, and purchaser shall be responsible for and bear all costs of repair or replacement due to any defect in or failure of this part. Purchaser also acknowledges that there will be no warranty coverage for any part that fails as a result of the installation of this part. Purchaser accepts all responsibility for all vehicle modifications and potential risks.

THERE ARE NO WARRANTY PROVISIONS IMPLIED OR GIVEN ON COMPETITION/PERFORMANCE UPGRADE APPLICATIONS AND USE.

Important Notice

Installation of this part on a vehicle intended for use on public roads may violate laws and regulations including those relating to emissions requirements and motor vehicle safety standards. Purchaser must verify all required laws and regulations in your country and/or local government and take necessary action before the vehicle installed with this part is used on public roads. In addition, installation of this part may void warranty coverage on your vehicle. For further information on this part, please contact the dealer from whom you purchased the vehicle.

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Turbocharger Fault Finding Guide

Oil leak from turbine seal	Oil leak from compressor seal	Cyclic sound from turbocharger	Turbocharger noisy	Blue exhaust smoke	Excessive engine oil consumption	Black exhaust smoke	Engine lacks power	Engine stall during acceleration		Cause	Remedy
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Clogged air filter element	Replace element according to engine manufacturers recommendations
			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			Obstructed air intake duct to turbo compressor	Remove obstruction or replace damaged parts
			<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>			Obstructed air outlet duct from compressor to intake manifold	Remove obstruction or replace damaged parts
			<input checked="" type="checkbox"/>							Obstructed intake manifold	Refer to engine manufacturers manual and remove obstruction
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Air leak in duct from air cleaner to compressor	Correct leak by replacing seals or tightening fasteners
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Air leak in duct from compressor to intake manifold	Correct leak by replacing seals or tightening fasteners
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Air leak at intake manifold to engine joint	Refer to manufacturers manual and replace gaskets or tighten fasteners
										Obstruction in exhaust manifold	Refer to engine manufacturers manual and remove obstruction
			<input checked="" type="checkbox"/>							Restricted exhaust system	Remove obstruction or replace faulty components
			<input checked="" type="checkbox"/>							Gas leak in exhaust manifold to engine joint	Refer to manufacturers manual and replace gaskets or tighten fasteners
			<input checked="" type="checkbox"/>							Gas leak in turbine inlet to exhaust manifold joint	Replace gasket or tighten fasteners
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Gas leak in ducting after turbine outlet	Refer to engine manufacturers manual and repair leak
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Obstructed turbocharger oil drain line	Remove obstruction or replace line as required
				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Obstructed engine crankcase vent	Refer to engine manufacturers manual, clear obstruction
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						Turbocharger centre housing sludged or coked	Change engine oil and filter, overhaul or replace turbo as required
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						Fuel system defective or maladjusted	Refer to engine manufacturers manual, replace or adjust faulty components
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Engine crankshaft timing incorrect	Refer to engine manufacturers manual and replace worn parts
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Worn piston rings or liners (blow by)	Refer to engine manufacturers manual and repair engine as required
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Internal engine problems (valves, pistons)	Refer to engine manufacturers manual and repair engine as required
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Dirt caked on compressor wheel and/ or diffuser vanes	Clean using a non-caustic cleaner, correct source of unfiltered air and change oil and filter
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Damaged turbocharger	Find the correct cause of failure, replace turbocharger as required
			<input checked="" type="checkbox"/>							Wastegate malfunction	Check wastegate and actuator operation
<input checked="" type="checkbox"/>										High boost pressure triggering ignition cut out switch	Check wastegate and actuator operation, replace faulty parts