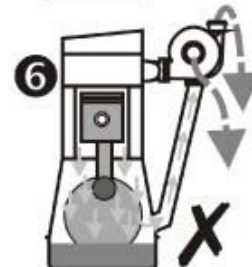
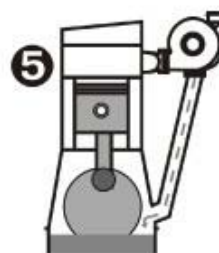
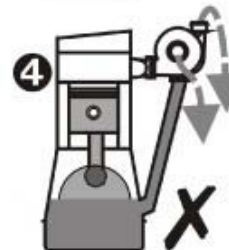
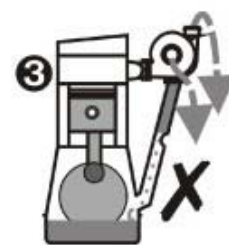


## Garrett Turbocharger Installation Instructions

Before installing a replacement turbocharger it is important to find the reason for the damage to the previous turbo.

### IMPORTANT NOTES:

1. Failure to follow these instructions can lead to turbocharger damage and may void warranty.
2. Changing the calibration of a wastegated turbo may damage the turbo/engine and voids warranty.
3. Correct gaskets must be used - they must not overlap holes. **1** Gasket covering part of oil hole - reduces oil supply to turbo or if gasket material breaks away, may totally stop oil flow. **2** Gasket clear of oil hole. Liquid gasket or sealants are not recommended, particularly for the oil inlet/outlet. Excess material may break away, reducing or stopping oil flow.
4. Refer to engine /vehicle manufacturers literature for correct oil type and quantity. Also, for correct torques and installation details.
5. Prevent dirt/debris from entering any part of the turbo during installation.
6. Before fitting the turbocharger, check that the part number is the correct one for the engine. fitting the incorrect turbo to an engine may damage the turbo/engine and will void the warranty.



### INSTALLING THE TURBO

- All air hoses connected to the turbo must be totally clean and undamaged.
- Air filter and housing must be totally clean and free from debris.
- Clean engine breather system and check function.
- Remove old gasket material from the exhaust manifold and pipe. Faces must be undamaged.
- REMOVE PLASTIC OR FOAM BLANKING PLUGS FROM THE TURBO BEFORE FITTING.
- **8** Fill the oil inlet hole of the turbocharger with new engine oil and spin the compressor wheel by hand a few times - it should spin freely. Note: it is normal to feel some up and down movement on the wheels.
- Fit turbocharger onto manifold or engine block (as applicable) using the correct new gasket or joint ring, then reconnect the exhaust pipe. Tighten all nuts/bolts.
- Oil feed and drain lines must be totally clean and undamaged - oil flow MUST be unrestricted. Check that any flexible hose liners have not collapsed internally. Check that oil feed line is not too close to source of heat. **3** Oil level OK, but drain line damaged - causes oil leaks from turbo.
- Fit oil drain line. Refill the oil inlet hole with new clean engine oil and reconnect the oil feed line.
- Fit air hoses and tighten.
- Use new air, oil and fuel filters, refill engine with new engine oil.
- If possible, prevent the engine from firing and crank the engine for 10-15 seconds to prime oil feed. **7** Start the engine and idle for 3 to 4 minutes before increasing speed. Check for oil and gas/air leaks.
- Stop engine and re-check engine oil level Note: oil level should NOT be above the point where oil returns from the turbo to the engine.

**4** Oil level too high - blocks oil drain from turbo - causes oil leaks from turbo

**5** Oil level correct to specification.

Check crankcase pressure. High pressure may be caused by piston bypass or blocked breather system.

**6** High crankcase pressure can stop oil from draining - causes oil leaks from turbo.

