



## Turbocharger Failure on 1999-2012 Subaru 2.5L Engines

The AERA Technical Committee offers the following information on turbocharger failure on 1999-2012 Subaru 2.5L engines. Subaru believes the main cause of turbocharger failure is lack of lubrication due to insufficient engine oil maintenance.

Proper oil change maintenance is critical to the lubrication of engine components, especially in turbocharged engines. When engine oil maintenance is not performed at required intervals (or before), oil gelling (sludge) and deposits caused by deterioration of the oil will clog oil passages, causing excessive wear from lack of lubrication. If the mesh filter screen located inside the banjo bolt (See Figure 1.) that secures the turbocharger oil supply pipe to the back of the right cylinder head becomes clogged, the turbocharger will fail. In addition, this will also cause damage to the engines Active Valve Control System (AVCS).

Subaru of America Inc. recommends using synthetic motor oil in all turbo charged engines. When using synthetic oil, you must use oil of the same classification, viscosity and grade shown in the vehicles' owner's manual, and follow the oil and filter changing intervals shown in the maintenance schedule. If the vehicle is used under severe driving conditions such as moderate to hard acceleration and engine braking on a somewhat regular basis, shorter oil change intervals may be advantageous.

If turbocharger failure has happened and it can be determined that no additional engine damage has occurred, Subaru recommends using an engine flush before installing a new turbo. Subaru engine oil system flush (Part # SOA868V9290) is a specially formulated cleaner that removes oil deposits from critical areas of the engine's lubrication system.

**Banjo bolt and Mesh Screen  
(note direction of screen)**



**Figure 1. Banjo Bolt**



The mesh filter screen is only available with the purchase of a new banjo bolt, Part#14445AA090 which comes with 2 new washers. The new banjo bolt should be torqued to 21.4 FT/LBS.

- Make sure the mesh screen is installed in the proper direction as shown in Figure 1; incorrect installation will cut off oil supply to the turbo.
- Do not confuse the oil supply mesh screen with the AVCS union screw filter which looks similar, but, the filter was removed from production engines in April of 2005. If a union screw filter is encountered, it should be removed and the previous union nut replaced with the new Part #15194AA270.

Depending upon the time involved while the turbocharged was operated damaged each situation will be unique and complete engine disassembly may be required. It is suggested all engine oiling system passages be checked for cleanliness before the turbocharger is replaced.