

Volvo 700/900 Turbo Identification

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[Photos and Text by John Sargent] The turbocharged B23FT, and B230FT came with several different turbochargers depending on the model year. The Garrett turbos are known to be more robust than the Mitsubishi turbos, and have better metal in the exhaust turbine. The Mitsubishi turbos are easier to remove and replace with the single stainless steel clamp that retains the turbo to the wastegate housing. If you change the engine oil frequently both turbos give good life.

This Garrett T3 is on a B23FT, and is water cooled. The T3 was used starting on the 240 turbos and continued through the 1989 700 turbo cars. It became water cooled in the 1987 model year and most replacement T3s were water cooled. Note the flat flange oil supply directly on top of the turbo. The CBV (Compressor Bypass Valve) is mounted on the head and is on the far right of the picture.

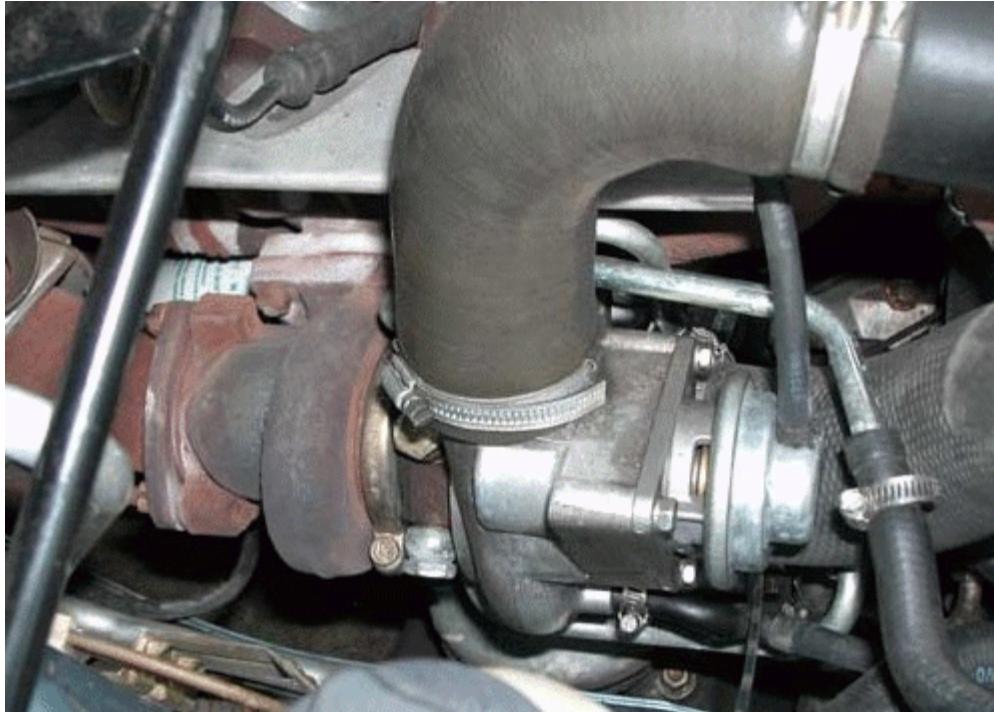


This Mitsubishi TD05 is on a 1987 B230FT and was used in 1987-1989 model years. Note the wastegate is bolted to the exhaust

manifold from the back side. This turbo is a factory rebuilt turbo. The original owners of the car didn't change oil very often, sometimes up to 12,xxx miles between changes. This turbo will put out more boost than the later Mitsubishi TD04, and the people who want lots of boost often use it. It has an integral CBV, as all the Mitsubishi turbos used on the 700/900 series do. 8



This is the early version of the Mitsubishi TD04 identified by the integral CBV mounted vertically. The wastegate housing is fastened from the front side of the exhaust manifold, which is a plus if you have to replace the wastegate. These turbos have great street driving qualities. This turbo was introduced in the 1990 model year with an improved exhaust manifold. I'm told the new exhaust manifold gave about a 10HP increase not reflected in the specs. These better flowing later manifolds are prone to cracking, while the early ones generally don't crack.



This is the later version of the Mitsubishi TD04 which is identified by the angular mounted CBV. There may be another version (with higher flow ratings) of this turbo used on a few 1995 940 cars. It should look just the same.



This is a Garrett T25. They are very rare. I bought this one from Brian Leppin and he said it is the only one he has ever seen. It has the integral CBV like the Mitsubishi turbos. It was used on the 940SE, and maybe a few other 700s and 900s. While the exhaust manifold for this turbo looks identical to the Mitsubishi exhaust

manifold, the machined flanges which mate to the turbo and different and the exhaust manifolds won't interchange. [Addendum from Shawn King] My 1991 740 Turbo Sedan (with an M46) came with the T25. It died, and I replaced it with a Mitsubishi TD04-13c. The exhaust manifolds are the same. I had to change out all the oil and coolant lines, but the manifold stayed in place, and the turbo bolted right up. I believe that only two models received the T25; the 940se and the 740s with the M46 transmission.



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