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S15 T28 onto SR20DET

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How it's done:

1) Remove turbo plumbing.

- Intercooler piping from turbo outlet (plug with rag to avoid dirt/dust entering)
- Wastegate Hose
- Inlet hose & AFM
- BOV re-circ hose (if applicable) (plug with rag to avoid dirt/dust entering)
- Rocker breather hose (if applicable)

2) Remove exhaust manifold heat shield. (4 bolts)

3) Remove black stock oil/air sep from back of head. (3 bolts, 2 hoses)

4) Unplug O2 sensor from loom.

5) Unbolt dump pipe from exhaust system. (no need to unbolt from turbo yet)

6) Drain Coolant system.

7) Undo and reomve the cast turbo inlet (2 bolts) to gain easier access to the oil and water lines behind.

8) Undo oil and water lines from the block, under the no. 2 cyl exhaust port (1 of each). Be careful not to lose the 2 copper washers from each the water/oil banjo's.

9) Undo the oil drain hose clamp from the block under the turbo and pull off the hose.

10) Unbolt exhaust manifold (8 nuts). You may have to remove the dipstick to get good access to the front nuts.

11) Undo the remaining water line from the block side of the turbo by moving the whoe manifold aseembly to gain clearance.

12) Remove manifold and turbo assembly.

13) Unbolt cast turbo outlet (3 bolts). Ensure you remove the gaskets too.

14) Unbolt and remove the dump pipe from the exhaust housing. (5 bolts)

15) Unbolt and remove the 2 lower heat shield pieces.

16) If the dump pipe has an internal wastegate splitter, it may be necessary to modify it with an angle grinder if your T28 also has an internal splitter, as some of them do.

17) Bolt the dump pipe to the new T28 turbo (5 bolts). It may be necessary to enlarge one of the bolt holes with a drill/file.

18) Seperate the T25 turbo from the manifold. (4 bolts)

19) Bolt the new T28 turbo to the manifold (4 bolts). It is wise to replace the gasket and bolts too.

20) The turbo core will need to be rotated slightly so that the T28 oil/water lines are on the same angle plane as the T25 ones. Loosen the exhaust housing bolts, and rotate the core/compressor housing as one until the core oil/water fittings are on the same angle plane as the T25, then re-tighten the bolts.

21) The oil drain piece on the T28 uses a slightly narrower bolt spacing than the T25. The bolt holes on the T25 piece will neeed to be 'slottted' or redrilled inwards to suit the T28. Then bolt this piece back on to the turbo.


22) Since the front mounting tab for the lower heatshield does not line up, the shield needs to be modded with a grinder to remove the front mounting piece so that it can be bolted up using the 3 rear bolts.


23) Bolt the manifold/turbo assembly back onto the cylinder head (8 nuts). It is wise to replace the gasket, preferably with a stainless one.

24) The 2 cast inlet/outlet elbows will not bolt up to the new T28 in the same fasion as the T25. The inlet piece needs to be cut, rotated and re-welded, whilst the outlet piece will point at a different angle, necessitating slight changes to the intercooler plumbing.

25) Bolt the dump pipe back onto the exhaust system.

26) Reconnect all 4 oil/water lines. The front 2 banjo fittings are particularly difficult to bolt to the block, with some forcefull bending of the lines necessary. Make sure the banjo bolts go into the block dead straight, you do not want to cross-thread the holes. Also be careful of the 2 copper washers for each banjo.

27) Bolt the cast inlet (modified) and outlet pieces onto the T28 turbo. (2 bolts and 3 bolts - remember the gaskets)


28) Plug O2 sensor into loom.

29) As mentioned previously, it may be necessary to modify the intercooler piping. Re-connect this to the turbo.


30) Replace the exhaust manifold heat shield. (4 bolts)

31) Bolt up the stock oil/air seperator.

32) Re-connect turbo plumbing.

- Wastegate Hose
- Inlet hose & AFM
- BOV re-circ hose (if applicable)
- Rocker breather hose (if applicable)

33) Refill coolant system, and check for leaks around turbo/block fittings.

34) Start engine and check for oil and coolant leaks around the turbo/block fittings.