



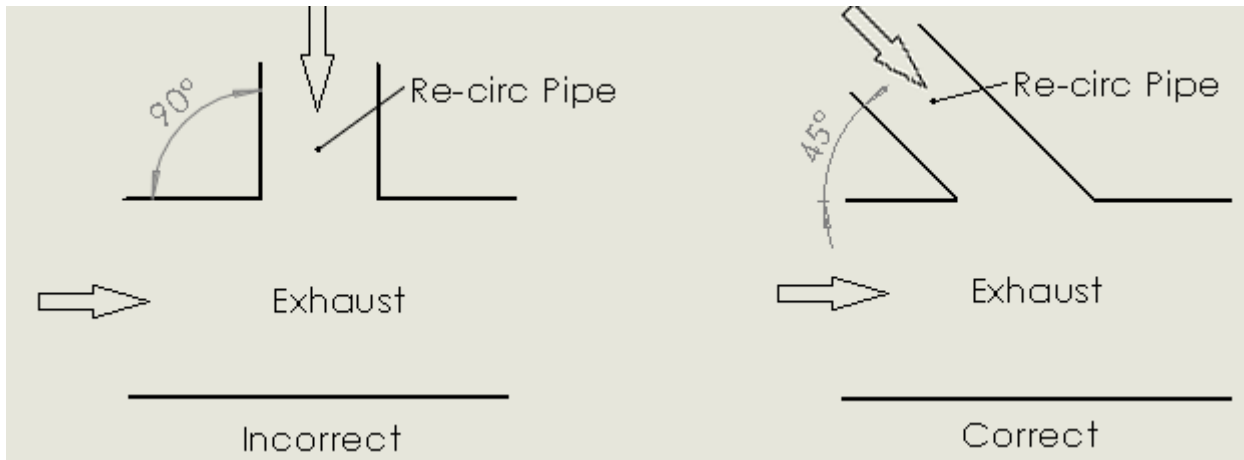
Fitment Guide

This is a general guide to help you fit our SINCO turbo manifolds. These are some helpful hints that we have learnt along the way that will help save time and eliminate error.

- **TURBO FLANGE THREAD PITCH is 10 x 1.25**
- **NO CRACK WARRANTY**-We give our manifolds a minimum of a 5 year no crack warranty, this term applies to manifolds that are not fitted by us at Sinco Customs. If we fit the manifold and setup all the other components i.e=turbo lines-intercooler piping-downpipe and bracing of the downpipe then we upgrade the warranty to 10 years. This warranty term is from the date of the invoice and the invoice must be kept and produced if you choose to claim on the warranty.
- **DO NOT** under any circumstances use exhaust cement to seal your exhaust manifold flange or turbo flange. The cement sets rock hard and if any of this goes through your turbine wheel at speed it will cause major damage.
- **DO NOT** heat wrap the manifold this causes overheating of the steel and will cause premature cracking and warping of flanges.
- **DO NOT** clock turbo oil gallery over 15 degrees from vertical this will prevent oil from draining correctly and could cause oil to bypass the bearings into the compressor or turbine housings. Use a minimum size of 13mm id pipe for the oil drain.
- **DO NOT** use chinese made external wastegates, these are cheap for a reason and are poorly made from cheap material. The wastegate is a vital part to your engine combo. Overboosting causes major damage!
- Use high temp anti-sieze on threads when locking nuts are used.
- We recommend using studs to fasten the turbo to the manifold as this will not wear out the thread in the turbo flange over time and allows better access to tighten the nuts around the turbine housing where space is limited-(we supply turbo stud & locknut kits) and can be purchased from our website
- To fit the studs to the turbo flange use the double nut method when tightening the stud into turbo flange and use a high temp retaining compound.
- Use a locking nut to fasten the turbo as a standard nut will work loose over time from heat expansion and vibration
- Spring washers will not work as they re-temper from the heat of your manifold/turbo
- We recommend replacing all exhaust manifold studs before fitting new manifolds

WASTEGATES

- When re-circulating the wastegate outlet pipe into exhaust ensure a low merge angle is used i.e



- When using a 38,40 or 45mm external wastegate we recommend the tube size for the outlet to be one size up from the gate size being used i.e 38 gate=41mm tube, 45 gate=50mm tube (outside diameter)
- A large oval hole is ideal where the re-circ pipe joins into the exhaust i.e the hole should be 1.5 times bigger than the pipe size used. This will ensure there is no restrictions when gases are entering the exhaust and will prevent boost spiking.

HEAT

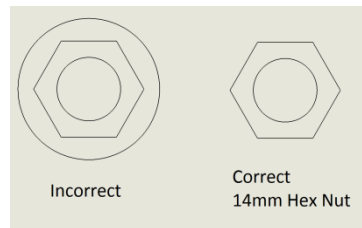
- With our manifold jigs we try our best to have a good compromise between fitment, design and space in the engine bay. In saying this when 3rd parties are manufacturing downpipes and other parts that go with a manifold set up it is a must that clearance is thought about with downpipes and mainly around the wastegate top hats as these are vunable to excess heat and the diaphams inside will melt.
- Heat shields and heat wrap for downpipes is a good idea to prevent vital parts from melting under heat (a must in track conditions) mainly: heater hoses, wastegate top-hats, vacuum line, brake lines and brake boosters.

BRACING-FLEXI JOINS

- To ensure good life from your manifold, downpipe bracing is a good idea to prevent cracking and to help prevent the turbo under vibration and heat coming loose.
- Flexi joints are also recommended in the exhaust to help with the weight and vibration of the exhaust, or a well mounted exhaust system

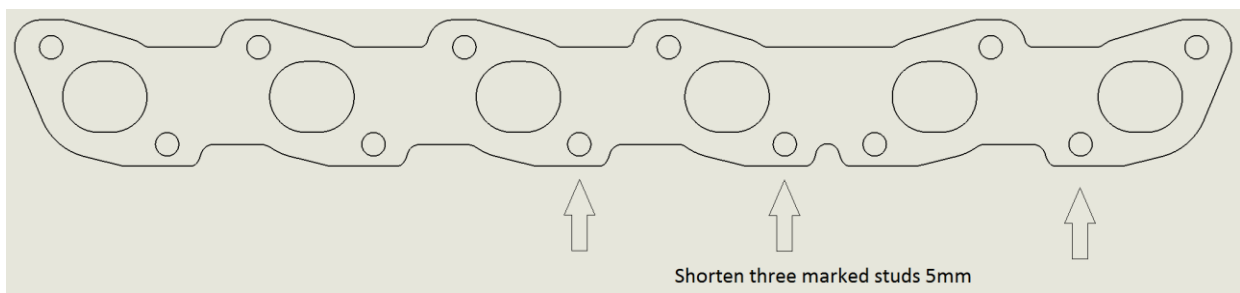
FACTORY FASTENING NUTS

- In most cases your factory fastening nuts from your exhaust manifold will not work with SINCO manifolds. If they are a flange nut the flange section will clash with the runners/weld on the main flange and prevent the nut from tightening correctly. Our manifolds are designed to use a 12mm nut with a M8 threads and a 14mm nut for M10 threads.



RB20-25-26 = This is only for the central position manifolds- The forward facing position does not apply

- If you use the factory exhaust manifold studs then x3 of them on the bottom row will need to be shortened by 5mm or they will hit on the runners and prevent manifold from bolting up.
- If the studs from our kits are used then this will not have to be done as our studs are the correct length to clear the runners.



1JZ-2JZ

- If you use the factory exhaust manifold studs then the bottom row of studs will need to be shortened by 5mm or they will hit on the runners and prevent manifold from bolting up.
- If our studs from our stud kit are used then this will not have to be done as our studs are the correct length to clear the runners.
- When tightening the bottom row of nuts you will have to hold the manifold out to the end of the studs and start the fastening nuts on the studs. You will have to do up the fastening nuts as the manifold pulls up to the head face or the nuts will clash with the bends/runners coming off the exhaust manifold flange

4G63

- If you use the factory exhaust manifold studs then the top row of studs will need to be shortened by 5mm or they will hit on the runners and prevent manifold from bolting up.
- If our studs from our stud kit are used then this will not have to be done as our studs are the correct length to clear the runners.