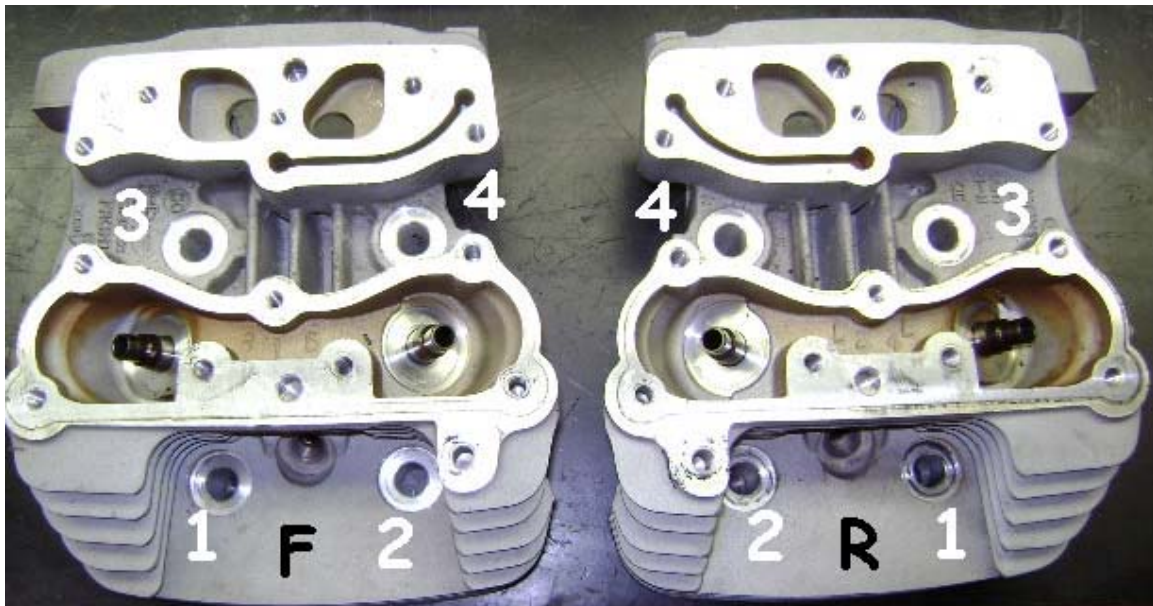


Copper Head Gasket Installation Instructions

*** DO NOT USE Cylinder head alignment dowel o-rings with Copper head gaskets ***

- 1) Check all gasket surfaces for flatness and imperfections, an excessively rough finish is not recommended and may cause gasket failure.
- 2) Check all hardware for defects. Clean all threads and lubricate with light machine oil, including the underside of the head bolt flange. Wipe away any excess.
- 3) There are 2 short and 2 long head bolts. The short head bolt go on the spark plug side. The 2 long head bolts go on the pushrod side.
- 4) Do not remove protective paper from gasket until absolutely ready to install. Once installed, Do not remove gasket from cylinder.
- 5) Before installing the head, place the head gasket on the cylinder and locate the gasket using the cylinder head alignment dowels. **DO NOT USE DOWEL ALIGNMENT O-RINGS WITH COPPER HEAD GASKETS.**
- 6) Once the gasket is located in place, make sure the gasket fits your bore. The gasket should not overhang the bore or combustion chamber in any area.
- 7) Once proper fitment is established, proceed with head installation.
- 8) Alternately snug all head bolts finger tight.
- 9) ****SEE FIRST NOTE ON BACK****, In sequence (1-2-3-4 as shown in picture), torque all head bolts to 9 ft-lbs. Then in sequence again, torque all head bolts to 14 ft-lbs. Again in sequence, torque all head bolts to 22 ft-lbs. Again in sequence, torque all head bolts to 35 ft-lbs. In sequence, FINAL TORQUE all head bolts to 42 ft-lbs.

**** NOTE HEAD BOLT SEQUENCE IS DIFFERENT FRONT TO REAR ****



Copper Head Gasket Care, Tips and Tricks

- Take your time between torque steps. The longer it sits before the next torque step the more the sealant compresses and a better seal results. Waiting 12-24 hours Before the Final torque sequence yields the best results and is recommended but not absolutely necessary.
- If the gasket is removed from the cylinder prior to completing installation or the gasket coating is damaged it can be recoated easily. First remove gasket coating with Brake Clean or other solvent. Do not handle the bare copper gasket as the oils from your skin will promote oxidation and prevent a good seal. Using Loctite® Copper Gasket Adhesive (30535), spray 4 to 5 light coats on each side. Give each coat 3 to 5 minutes to dry. Allow to set for 1 hour after last coat before using.
- Copper Head gaskets can be reused. To reuse the head gasket it must be cleaned and recoated as described above.
- Depending on the number of times reused or worked with, it may require Annealing. Copper is work hardened, do not bend it. Any attempt to straighten it will work harden it. This can cause micro fractures and weaken the gasket, annealing would then be required. As long as the gasket is not bent or damaged in any way it can be reused.
- To anneal the gasket it must be clean. Then heated to 900F and cooled. A small Propane or Propylene Fuel hand torch will work fine for this. It can be cooled by submerging in room temp water, edge first or air cooled. This will leave a discolored coating that needs to be removed. Using a very fine scotch brite pad, lightly brush away the coating. The gasket should be on a flat surface and the scotch brite should be backed with a flat object, not your hand. Oxy-Acetylene torches should not be used.
- We only recommend annealing once or twice and then replacement. Be sure to check fitment after any annealing process.
- Latex gloves should be used to handle bare copper to prevent any surface oxidation.
- We do not recommend using Stainless Steel head bolts under any circumstances. Using SS head bolts may result in a loss of clamp load and leaking head gaskets. Use at your own risk.
- When installed and used properly, a Copper Head gasket is blow proof. It can withstand high compression, detonation, turbo charging, supercharging, nitrous, hi temperature and virtually everything else EXCEPT improper installation.