

# **RPM**

**RADUECHEL PERFORMANCE MOTORSPORTS**

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Thank you for purchasing the RPM oil cooler kit. These instructions are designed and written to ensure proper installation of the kit. Failure to follow these written instructions could lead to an oil leak and possible engine failure.



Your new oil cooler fittings are installed and torqued to the proper specification.  
***DO NOT tighten further or the fitting is susceptible to cracking.***

- 1) Remove the belly pan fairing.
- 2) Drain the engine oil.
- 3) Remove exhaust system.

- 4) Remove four 5mm allen head bolts attaching the oil cooler lines to the drain pan and remove the lines from the pan. Oil will leak out so make sure you have a drain pan under them as well.
- 5) Remove the oil cooler line holder mounting bracket at the center of the engine. Remove the 12mm nut holding the O.E. cooler bracket to the engine. (The oil lines should not be secured at any point other than at each fitting.)
- 6) Remove the two 10mm hex head bolts attaching the cooler to the frame and remove the cooler.





- 7) Remove the steel flanged sleeve insert and rubber bushing from the factory oil cooler as they will be used on the new mounting hardware. (If difficult to remove, soak in hot water to soften rubber)



- 8) Locate the two lower cooler mounting brackets from the kit. Install the rubber bushings into the new brackets. Once the bushings are installed, use a small screwdriver to seat the bushing into the bracket.

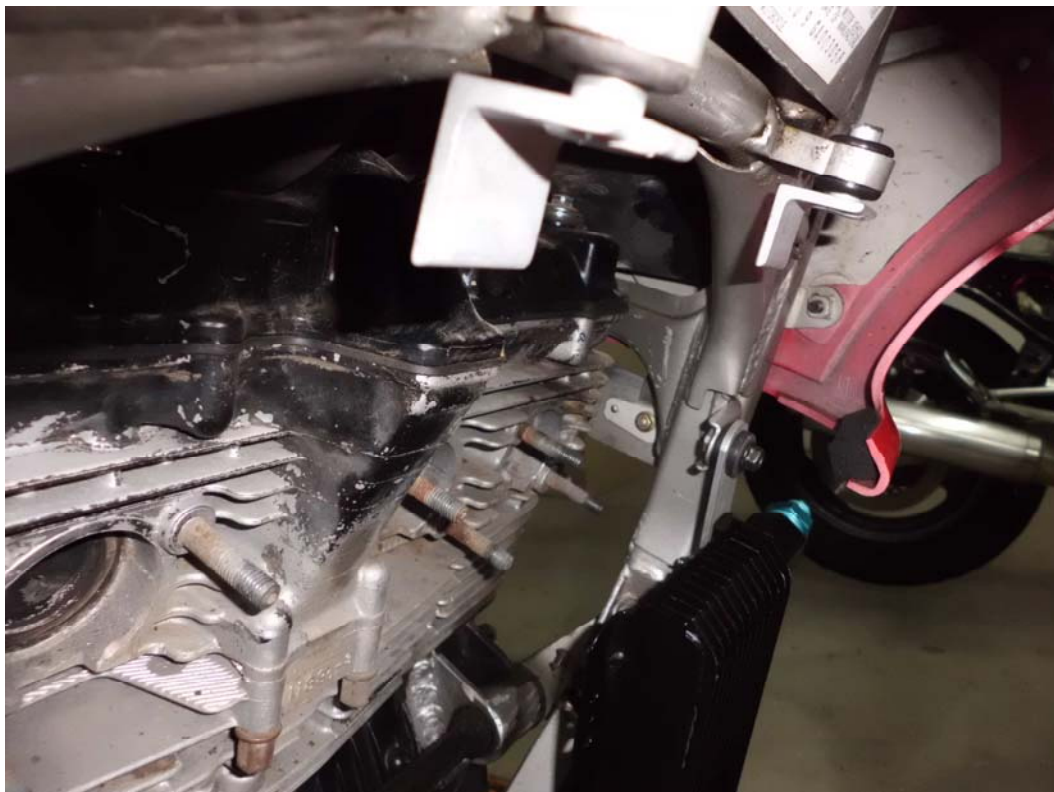


- 9) You will notice the lower mounting bracket  $\frac{1}{4}$ " holes are offset within to one side. The offset of the hole should be down so there is more bracket material at the top.
- 10) With the RPM cooler lying on you bench with the fittings point towards you, mount the brackets to the lower flange. The offset of the bracket will allow the bracket to be flush with the bottom of the flange. Install the four mounting bolts with a washer at the head and nut. Tighten until there is just enough

movement to move the bracket for alignment purposes on the frame. Install the steel bushing/washer into the rubber bushing with the flange towards the front of the bike.

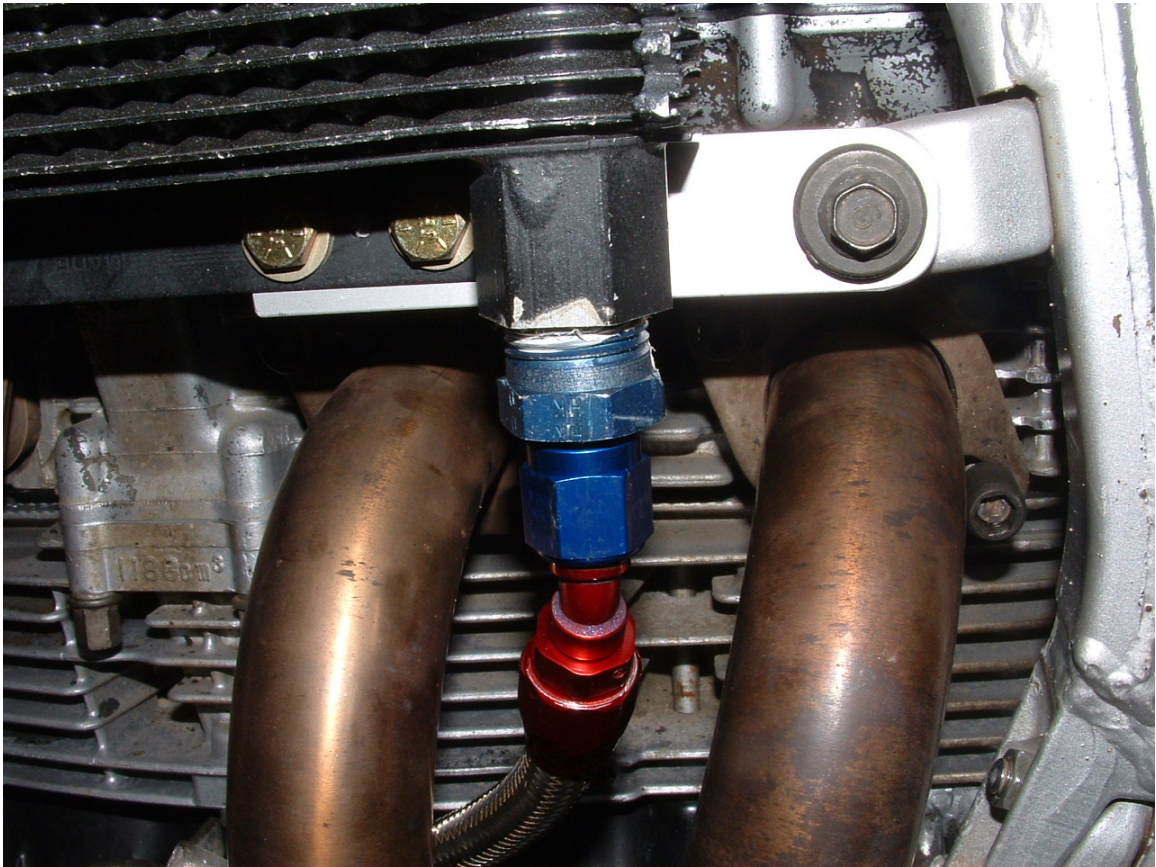


11) Locate the two upper pin mounting brackets and place them into the factory round grommet mounting point of the frame. The bracket should be turned so they are offset to towards the engine.





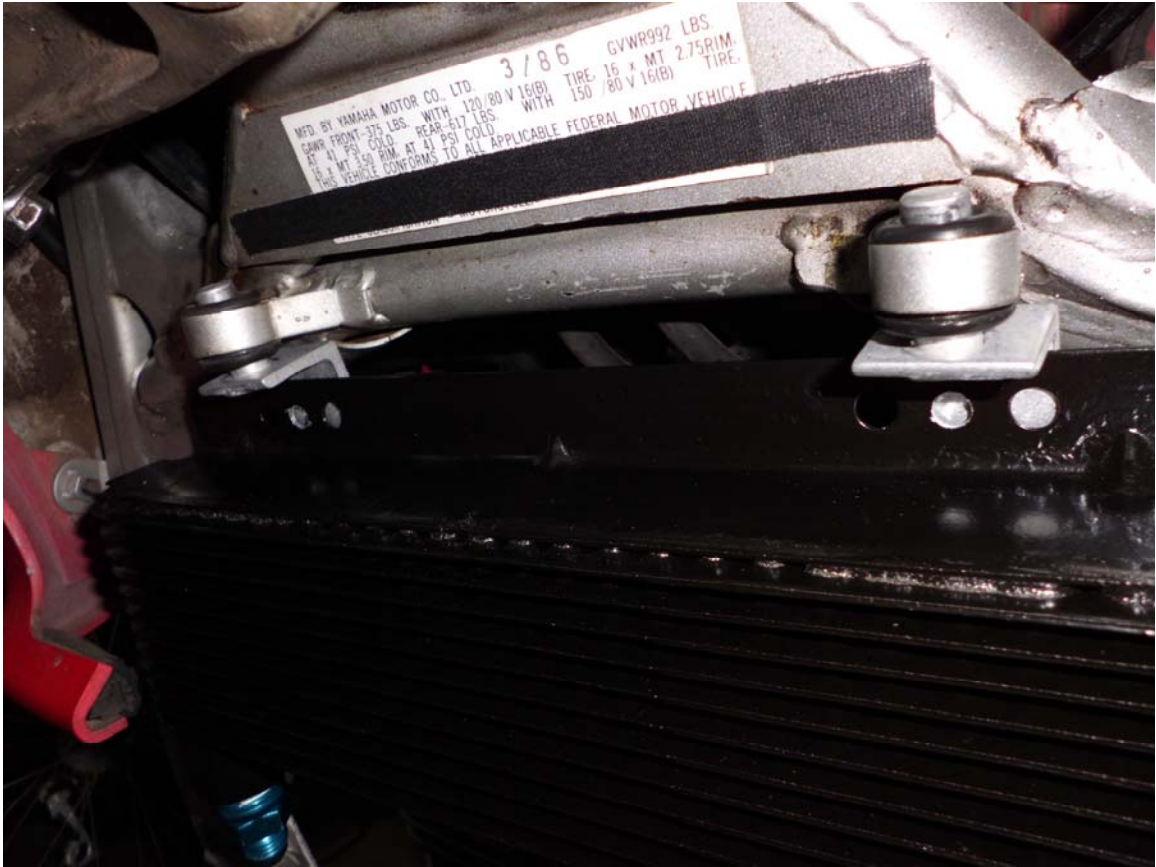
12) Mount the cooler to the frame via the lower mounting bracket using the 10mm hex bolt removed from this location earlier.



13) Once the bolts are installed, adjust the positioning of the cooler so the lower brackets are flush with the bottom edge of the cooler and tighten the 1/4" bolts securing the cooler to the mounting brackets.



- 14) You will notice the upper cooler mounting flange is resting against the upper brackets. With a felt marking pen, transfer the cooler mounting hole location to the upper brackets. Designate the left and right brackets as the holes will not be uniform.





- 15) Remove the lower mounting bolts and cooler so the upper bracket may be removed and the hole drilled.  
16) Center punch the traced hole location and drill using a 17/64" drill bit to make a hole in the upper mounting brackets.





17) Mount the, now drilled, upper cooler brackets to the front of the upper mounting flange and tighten the bolts until there is just enough movement to move the bracket for alignment purposes.





- 18) Install the cooler with the upper mounting brackets installed into the upper factory round grommets, reinstall the 10mm hex head mounting bolts and tighten them.



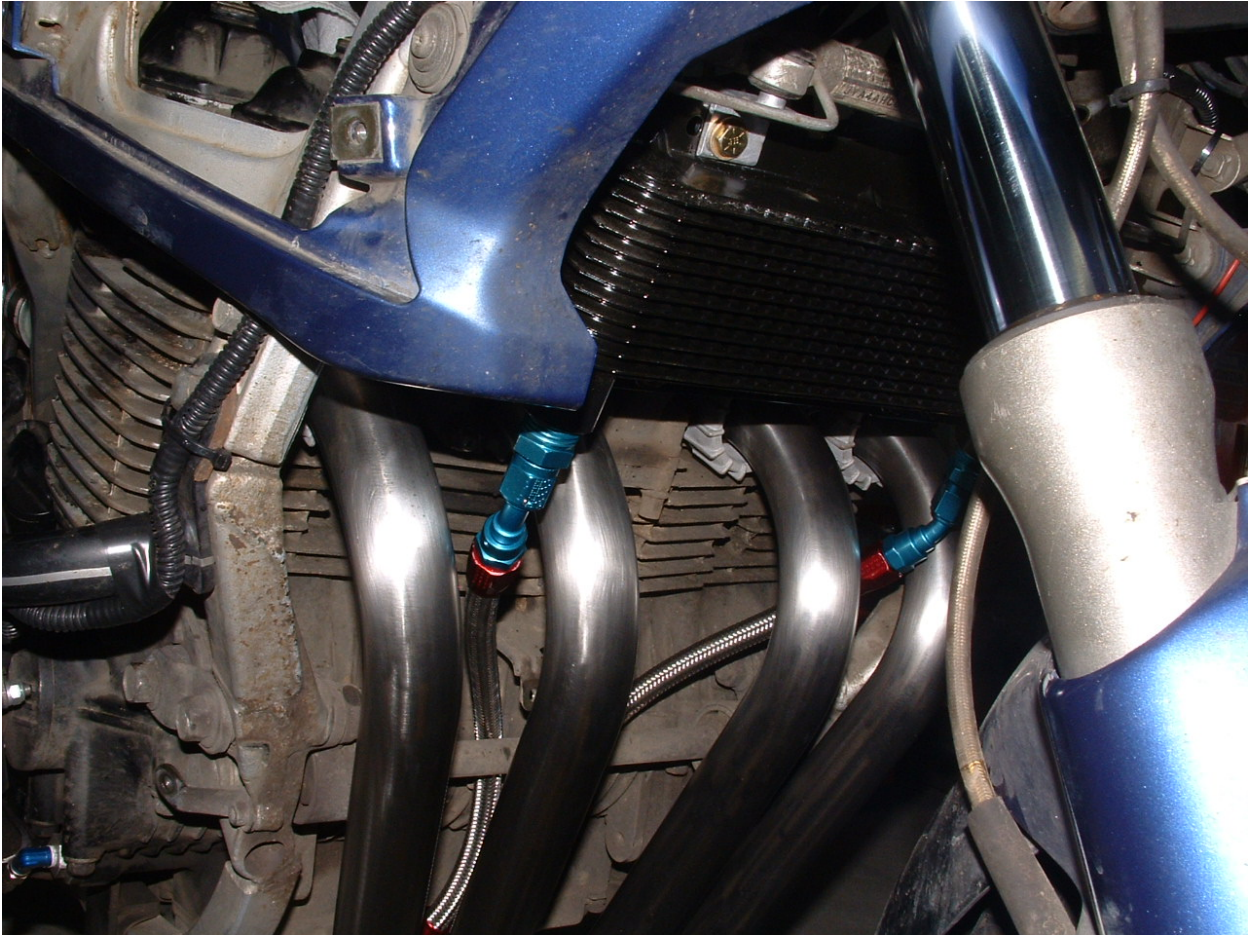
- 19) Tighten the 1/4" upper mounting bracket bolts.

- 20) Install the new o-rings onto the oil pan fitting with a light coat of oil.

- 21) Wipe the oil pan outlets clean and install the oil pan fittings. Install the four 5mm allen head bolts into the oil fitting and torque to 10Nm, 7.2 ft-lb or 86 in lb.



22) On the 84-90 the oil line run in front of motor mount cross tube. 92+ the oil lines should run behind the motor mount cross tube.



23) Note the oil lines have a 30 and 60 degree fitting on the end of each hose. The 30 degree or less sharp curved fitting attaches to the oil cooler add a drop or two of clean oil to the threads and seat and install hand tight. The hoses should be curve to the center of the bike.







24) The fitting are a swivel design fitting that will allow you to rotate each respective hose end for proper alignment to the respective fitting.



25) Once the lower hose fitting is aligned with the oil pan fitting, add a drop or two of clean oil to the threads and seat and install hand tight.



26) A/N fittings are designed to seal via the taper seat in each fitting and **NO** Teflon tape or pipe dope should be used on the threads. The use of Teflon tape or will promote over-torque of the fitting resulting in damage.

27) The fitting should be tightened with a properly designed A/N fitting wrench or a mid-grip of an 11/16” open-end wrench.

**Manufacture Torque Spec: -6 fitting; 16.25 ft-lb.**

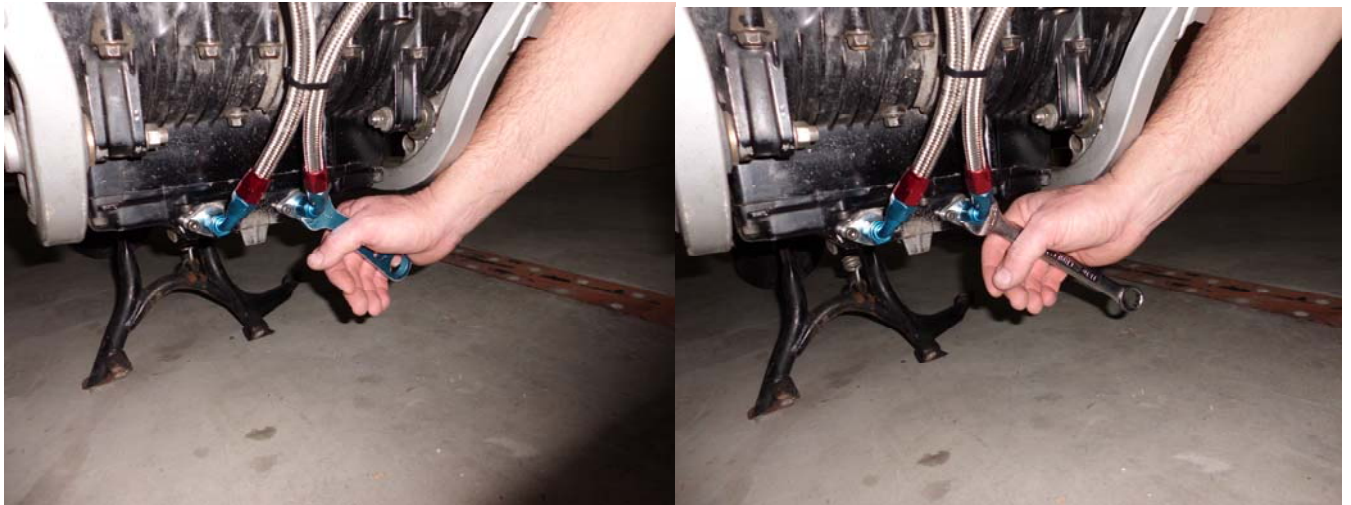
**Manufacture installation & torque recommendations:**

*“Many people over-tighten the aluminum fitting on the adapter, which distorts the 37 degree seat and may cause a leak. Both the threads and the seat surface should have a drop or two of clean oil to smooth the tightening process. The maximum torque specifications should be followed as listed above. (An alternative method if tightening is to bring the nut to “hand tight” and then rotate it another ¼ turn with the proper wrench.”*

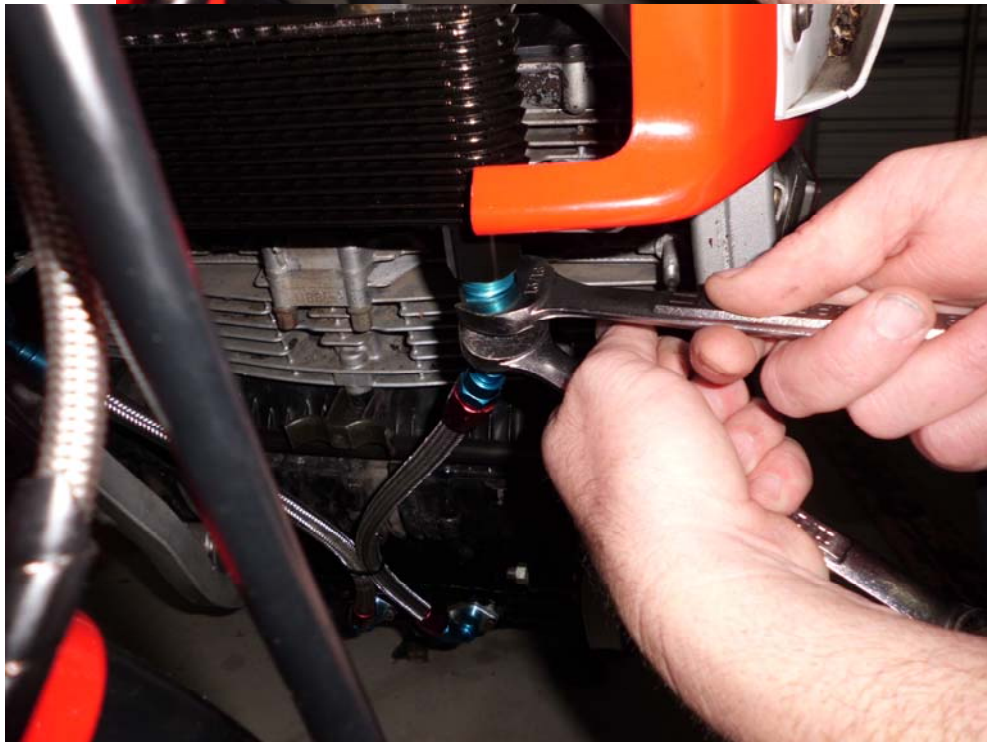




- 28) Supporting the lower fitting & hose with your hand torque the lower oil pan connections via the recommended procedure above; **DO NOT** allow the fitting/hose to turn or spin.
- 29) Install the complete header system and tighten
- 30) Turn and adjust each upper fitting at the cooler to gain the maximum amount of clearance from the header.



- 31) Use a 13/16" wrench to support the blue threaded oil cooler fitting. Using the above torquing procedures tighten the fittings at the oil cooler; **DO NOT** allow the fitting/hose to turn or spin.  
**Failure to support the oil cooler fitting will cause the oil cooler hex fitting to turn and crack resulting in a leak**



32) Install drain plug and refill crankcase with oil.

33) Start the engine and allow it to rise to operating temperature, checking for leaks at all points of the new oil cooler connection.

If you have any concerns or questions regarding the installation of this kit, please contact me.

Thank you for the purchase and continued support, it has been my pleasure to work with the great owners of the Yamaha FJ and I will continue to develop new and improved products and keep a supply of parts to keep your FJ on the road.

Thanks again, Randy