

AIRMAIL

Newsletter of the **AIRHEADS BEEMER CLUB**, a non-profit motorcycle club for owners of air-cooled BMWs.

MOA club #214

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Simple Fi

Airtech

by ABC Technical Consultant and "Friend of the Marque"
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1. Members are requested to check their back issues of *Airmail* for info before contacting Oak. Otherwise, he may be reached at AskOak@aol.com
2. Postal inquiries to Oak can be made at the above address, but they must include two detached, first class stamps (no postage meter stamps).
3. Include the bike's year, model and serial # with every query.
4. **Feedback** to Oak's solutions is requested as a courtesy.
5. When he has time, Oak is willing to perform mechanical work on airheads such as head and tranny renewal. Contact him for details.
6. **TECH INDEX:** Oak has a complete 60 page index available covering cover *Airtech* material from Jan. 1995 through Jan. 2008 for \$21 (postpaid USA) per copy. Foreign mailing costs will be higher: Please inquire?



ALL technical tips in *Airmail* are suggestions from folks who may or may not be BMW experts. Confirm the advisability of their ideas with your BMW dealer before trying them out.

STRIPPED STUD THREAD REPAIR

Jan: This appears to be a major breakthrough to resolve the disasters with studs pulling out of engine blocks. Repairs normally involved stripping the engine and sending it out.

A rider from Colorado wrote in with the problem of a stripped stud that already had a Helicoil insert, probably installed at the factory like many others. The cause of the stripped studs is likely due to a blunder at the factory which was never divulged. All that BMW ever released was a report that studs pulled out and offered a first oversize helicoil repair sans tooling.

The tool kit now available via the aftermarket will resolve repair issues for first time using a Helicoil or an oversize where the Helicoil may have stripped out. The Helicoil since earliest use, has been improved.

For first time repair, BMW makes available a special longer coil that locks into place with a friction indent in the coil, giving a stronger grip and resistance to unwinding.

For oversize, BMW had nothing to offer, but the aftermarket tool kit with second oversize inserts solves that problem enabling resurrection of a normally scrapped engine block. The following offers details on what the wrencher can do now.

Oak



Dear Oak, I have a dandy '91 R100GS with about 30k on the clock and have found to my dismay that it has a stripped head stud thread. It is the left hand top front. I discovered it when doing my first valve adjust/re-torque on this bike.

Just to make things worse, upon closer inspection I find that it had been Helicoiled once already. The local machine shop has an alignment jig for this procedure but is a little leery of trying to install a Timesert because of the possibility of blocking up oil galleries with metal chip contamination. They normally like these sleeve inserts because they are thinner and offer a shoulder to brace against.

So I must humbly ask the master "what next?" I've reviewed my Tech Index on this but haven't come across anything yet. I suspect you are going to tell me to stop crying and tear down the engine, but any advice at this point is most helpful.

Thanks for your help, and best wishes!
AD of CO

Hello AD, The matter of stripped cylinder studs has been discussed in *Airtech* more than once, but you have missed the search on it. The prior proposed solutions were not appetizing at all, involving pulling the engine, and sending it out for repair, and only for first oversize stud insert repair.

Since then, a much more comforting solution is now available. There is a gent in your state with whom I have

been working with for some months who owns a company in Boulder and decided to build a precision tool package for dealers or service shops, as well as clubs and individual owners, to fix the exact problem you described. Together we developed a workable, high quality tool kit which contains all the necessary tooling with fixturing to permit repair of the problem at home, using a custom made special insert that would be oversize from the helicoil you already have.

The oversize insert is made of high strength alloy aluminum instead of steel. This equalizes thermal expansion coefficients because the insert and engine block material are relatively identical to prevent thermally related expansion loosening and leakage.

The toolmaker worked it out nicely and the cost of the tool set should more than pay for itself with just one repair, saving an enormous amount of grief, delay, and expense. Shipping of the engine block alone would likely approach the cost of the tooling.

I suggest you contact Bill Hollander in Boulder, CO at 303-447-2558 or bhollander@hpd-online.com His web address is <http://www.hpd-online.com>

Let me know how this works out for you.
Oak