

BEARING ON THE SUBJECT

ROLLERS IN YOUR HEAD

*Read This Before You Service
Your Steering Head Again*

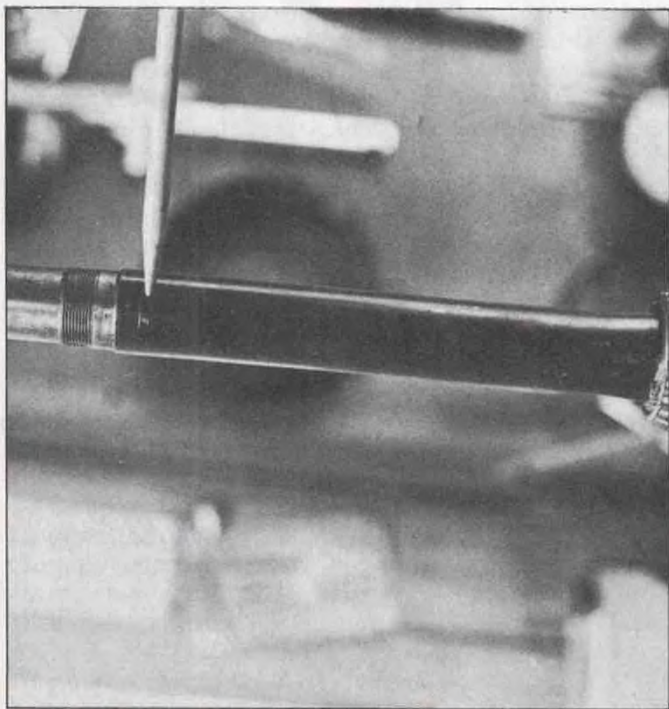
By the Dirt Bike Staff



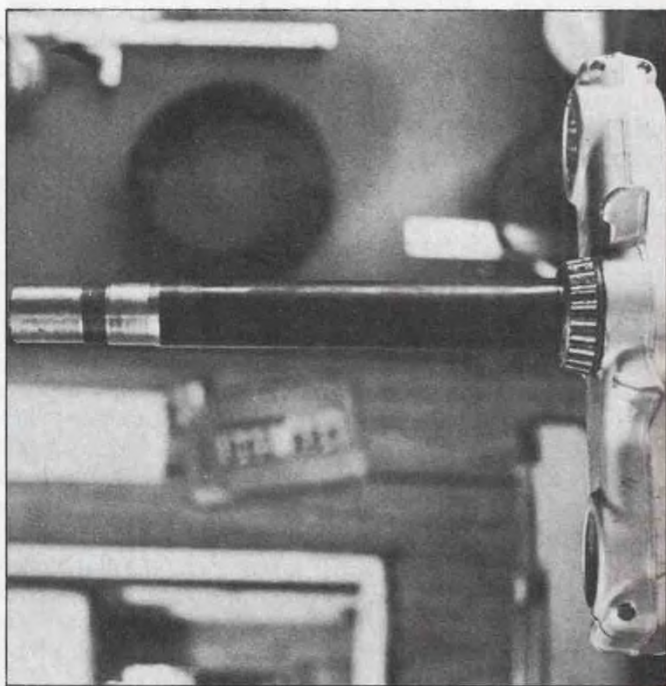
The old standard on the right, the alternative on the left. Which looks stronger to you?



Tapered races tap into the head with no trouble.



On the newer RMs, it's necessary to have someone turn down the steering stem on a lathe...



... so it looks like this. The tapered bearing inner race has a larger body than the old ball races, and won't tighten properly if the stem is left stock. Everything else will fit fine.

Steering heads are a very simple thing to work on, but always a pain in the neck. In order to get to them, you have to violate that finely honed bar position it took you so long to dial in, disconnect all the cables, remove the forks, pull the top triple clamp, and

then loosen the adjustment nut and be greeted by a scattering of dry little ball bearings all over the garage floor.

And they usually are dry, because by the time you get around to service them, it's way overdue. Aside from an occasional tightening, the steering

head is an easy spot to not think about—and you really should think about it.

Dry ball bearings are the worst thing you can run with. They can make your bike handle badly, tire your arms out, and at the very worst,

destroy your frame. That's right. They can turn that finely honed tube at the front of your frame into a piece of gnarled junk, and at that point, a whole new frame is the only answer.

Got you nervous, didn't we? Well, the best thing you can do, RIGHT NOW, is go on out and pull that sucker apart and treat it to some fresh grease. Unless you're one of the lucky ones, your bike will need it bad, and you may even need to replace the balls and races if they're dented or worn.

Who are the lucky ones? Anybody owning a new bike with tapered roller bearings in the steering head. The new PEs have them. So do all KXs and KDXs. Your YZ or IT may also be fortunate.

This is the big deal: ball bearings are the worst thing that ever happened to steering heads. They cannot handle the loads generated by long-travel suspensions, or heavy bikes, or abusive riders. They wear very rapidly and need constant attention. In a word, they are WRONG, and people are just starting to find that out.

Tapered roller bearings, on the other hand, are a lot better for the job. They can handle much more of a load, and spread it out over a larger area. They will not dent, as a ball race will do, and they allow for a much finer adjustment. At the moment, they are the best thing to install in bikes without them.

On this basis, when Team Dirt Bike's token pro rider, Kenny Zahrt, needed steering head service on his RM400, we decided to go full pop with an accessory set of tapered bearings. As it turned out, we're glad that we did.

The latest RMs still come stock with ball bearings. This would be no problem, we thought, because there's hardly a more scrupulous maintenance person than Zahrt. He keeps his bikes razor sharp, and admits to have serviced the steering head on the 400 at least twice since he's been racing it.

We pulled it apart, one sunny afternoon, and scattered the usual balls all over the floor. No problem. We had a nifty replacement set of tapereds, called THB bearings, from William Myshkoff in Ringwood, NJ. We had been warned that the RM set wasn't a completely drop-in installation, and so on some bikes, a stepped area would have to be machined off of the steering stem in order for the larger tapered bearing bodies to fit

properly. No problem, we said, we'll burn that bridge when we come to it.

We punched out the old races, dropped them in the bin, cleaned everything up, and tapped in the new races. This is when we got our first shock. Even though the RM had been maintained as best as humanly possible, and the bearings were never allowed to get loose, the pounding of dozens of races in the past four months had oiled the steering head. Not enough to ruin it—as a matter of fact the damage was very minor, and will have no effect on the new bearings. The single scary fact remained, that no matter what you do, if you race a bike steadily with ball bearings in the steering head, you will eventually ruin your frame.

("Ovaling" is just what it sounds like: the up and forward pounding of the forks over rough ground transfers directly to the steering head in a front/back motion. The same clicking you feel when you jerk your forks back and forth, testing to see whether or not your bearings are loose. If this clicking is left unchecked, it will pound the steering head into an oval shape, and the only way it can be truly cured is with a new frame.)

About this time, we found out what kind of machining was necessary, and it shouldn't set you back more than a few bucks at your local machine shop. We borrowed a few minutes of lathe time off of our dear friend Herb Kane of Magnum Engineering, 14329 Victory Blvd, Van Nuys, California. Herb is a Ducati freak at heart, but

willing to do bizzare things to metal of any heritage for the right kind of coin. Check out the photos for the full scoop on what has to be done to the stem. Keep in mind that this need only be done to certain RMs, and normally THB bearings are a drop in operation.

From this point on, the operation goes as normal. Grease the bearings up, press the lower one on the stem and slip it into the head; push the top bearing down with all the required dust caps, spacers and such, and then tighten up the nut. It's best to overtighten it somewhat to seat the races, and then back the nut off for the proper adjustment. As with all new bearings, it's best to keep an eye on them for a few rides until everything seats in.

Will they feel any different? No, not unless your old bearings were completely shot, and in that case the new ones will feel marvelously smooth. The satisfaction is in knowing that your steering head is much stronger than it ever was before, and that by changing to tapered roller bearings, you may have saved yourself the price of a new frame somewhere down the line.

William Myshkoff offers bearing sets for all the big four street and dirt bikes, and just in case you have a pavement machine you'd like to update we'll reprint his entire list below. All models are \$34.95 a pair, complete with a small tube of grease and full instructions. Well worth the price. □

MODEL

AVAILABILITY: One set fits all models regardless of year.

#1 HONDA: All twins 250cc and larger, all inline 4 cylinder, and pre 1977 GL1000 Gold Wing.

#2-A HONDA: All pre 1976 XL250 & XL350

#2-B HONDA: All 1976 and later XL250/350/500 and XR250/500

#3 KAWASAKI: All KZ550/4, 650/4, 750/2, 750/4, 900/4 & 1000/4

#4 KAWASAKI: All S-2 350/3, S-3 400/3, H-1 500/3, H-2 750/3, KZ400/2 & KZ440/2

SUZUKI: All GT500/2

#5 SUZUKI: All GT, GS, DR, SP, RM, TM, ST, & PE series machines 125cc and larger. Also, RE-5 Rotary.

#6 SUZUKI: All 1979 & 1980 RM125/250/400

YAMAHA: All RD250/350/400 and XS360/400. Also, all race model TD, TR, TZ, 250/350.

#7 YAMAHA: All TX500/2, TX650/2, TX750/2, & All XS500/2, XS650/2, XS750/3.

Available from: William Myshkoff
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(201) 835-1185