

## LC4 Roller Bearing Upgrade: How To

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Having just completed the main shaft bearing upgrade on my 2000 640 Adv R, I thought I'd summarize my experiences and give an overview of the job in hopes of helping out others who might be considering the mod. All the usual disclaimers (use at your own risk, I'm just one guy who did the job on one bike, I'm not a professional mechanic, you paid nothing for this, etc.) apply.

In writing this, I'm drawing on my experiences, but also the experiences of tens of others who have been down this road before me and have been generous enough to document their experiences both on this forum and others, particularly KTMTalk.com. So this is in most ways a summary of what I've learned from others. If you want more details, be sure to read the following threads:

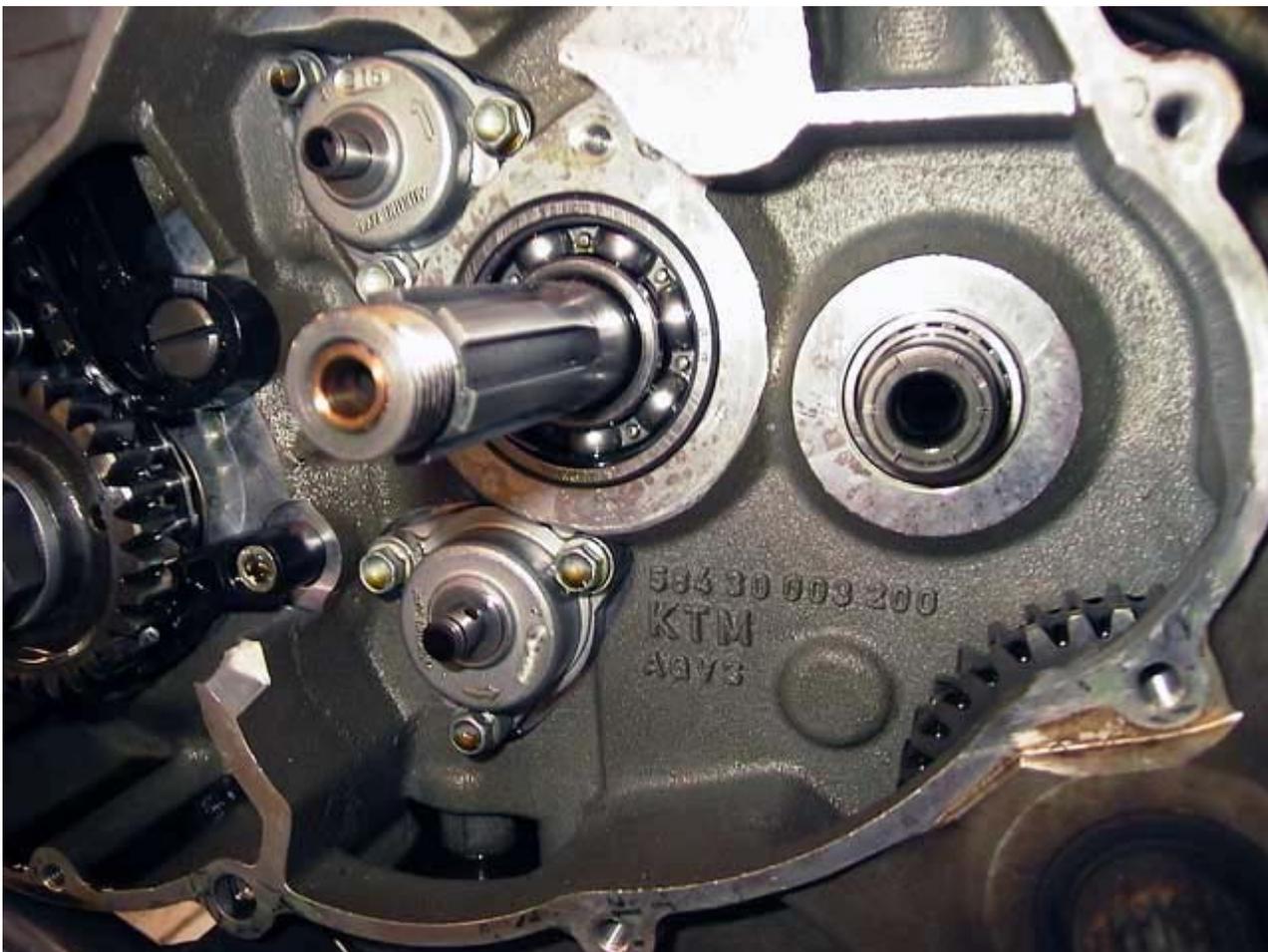
<http://ktmtalk.com/index.php?showtopic=44168>

<http://www.advrider.com/forums/showthread.php?t=71577>

<http://www.advrider.com/forums/showthread.php?t=69145>

### *Overview of the Upgrade*

The problematic bearing is on the left side of pre-2003 LC4 KTMs, underneath the clutch case cover. It lies directly under the clutch so it is at the center of the large circular housing on the left side of the engine. The bearing supports the left side of the transmission main shaft onto which the clutch basket is splined. (There is another parallel shaft in the transmission called the counter shaft that emerges on the opposite/right side of the bike onto which the countershaft sprocket is bolted. As you'd expect, different-sized gears engaged in various combinations between the two shafts provide for the five different gear ratios in the transmission.)



Up to model year 2003, KTM fitted a ball bearing (pictured above) to support the main shaft. According to legend, this bearing was failing in the 660 Rally bikes used for racing, so KTM developed a stronger roller bearing. In 2003, the roller bearing was made standard issue for all LC4s and KTM issued a very terse service bulletin that basically says "You can use the new roller bearing in earlier LC4 models" and not much else. (Sorry for the small image below, but the full-size one is no longer being hosted on the net that I can find.)



A few people have reported the mode of failure of the bearing as follows: The two halves of the bearing cage separate (they're riveted together), which causes the cage to lose integrity and allow the balls to migrate around in the bearing race and start wearing against each other. They also tend to migrate, by gravity, to the bottom of the bearing which causes the inner race to not be supported at the top. So the main shaft starts wobbling around. When this happens, the clutch basket starts flailing around, eventually starting to scrape the inner case cover. (I don't imagine having pieces of the bearing cage and metal bits from the failing balls floating around in the oil does any good either.)

As I understand it, all pre-2003 KTMs using the LC4 engine have the same bearing mounted whether they are Adventures, Dukes, LC4s, whatever, so whether your LC4-engined bike has the upgraded bearing is simply a matter of whether it is a 2002 and before or a 2003 and beyond. (Since KTM is often a little loosey-goosey with model year specs, I don't know if there are any issues with ambiguity around the 2002-2003 model year and I don't have any cutoffs based on VIN or manufacturing dates.) The old bearing (disassembled) and the new bearing are below, old on the left.



### *Should You Do the Mod?*

Tough question. On one hand, there are quite a few anecdotal reports of bearing failures on the net. Just working from memory, I'd estimate I've heard of 20 or so unique reports of failures, reported in [advrider.com](#), [ktmtalk.com](#), the [micapeak registry](#), and on the [Horizons Unlimited website](#). And certainly what one reads on the net is only a fraction of the total. The fact that KTM spec'd a new bearing is an existence proof that they felt the old bearing had a problem. On the other hand, KTM has been building these LC4 motors for tens of years and people have certainly taken many of them around the world without having the slightest problem with this bearing. Statistically speaking, I'd bet the chances of bearing failure with any individual bike are pretty small.

The bearing does give some advance warning of failure, but it probably won't be noticeable until it's already done some damage. As the bearing fails, the main shaft starts wobbling around which in turn causes the clutch basket to start flailing around under the left case cover. This causes noise and vibration. Further, as the bearing disintegrates and the clutch basket starts hitting things, you're going to start getting metal in your oil and engine. Many have reported a strange vibration in the left-footpeg as a precursor to failure.

One compromise between ignoring the problem and full replacement is to pull the left case cover, remove the clutch, and inspect the bearing. You can see if the cage looks like its separating and check for lateral play in the main shaft. On my bike, I could detect no play whatsoever in my original ball bearing and only the slightest hint of play in the new bearing. So my guess is that if you feel "much play" here, the bearing may be wearing and getting ready to fail. But if it feels nice and tight, then that's a good sign. Beyond this, I can't be more specific. You pay your money and takes your chances.

One caution: I don't think there is an ironclad guarantee that you can get the bearing out without splitting the cases. One guy has reported that he's done five or so of these repairs and in one case all attempts to extricate the bearing using pullers failed and the cases had to be split. So while nearly all of us who have done the repair have, one way or the other, gotten the bearing out with pullers, there is probably some small chance you could do everything right and end up with a destroyed old bearing and the need to pull the motor and split the cases. It's a definite risk.

### *Parts and Cost*

Of course, you need the new bearing:

Part Number: 58533025000

Description: CYL.ROLLER BEARING BC1-0076A

Retail: \$88.21

KTM also recommends that you replace the bendable tab lock washer under the clutch hub nut:

Part Number: 58332018000

Description: FLAT WASHER

Retail: \$3.82

You may need a new clutch cover gasket depending on how it comes off. I won't give a part number because there appears to be at least two different ones with a change in 2002, although I don't know the difference. Mine came off intact, so I just reused it. If you decide to get it, be sure to look at the parts diagram for your particular bike and get the right one.

Since you're removing the clutch, you may want to do some R&R on clutch parts as well, although my clutch was working fine and I didn't do anything here. In addition to the clutch plates which might need replacement, the clutch basket rotates on the main shaft with a needle bearing which could be replaced if desired. And since you're going to be draining the oil, you'll probably want to do an oil/filter change. In fact, you might want to have two sets of oil filters on hand in case you decide to do an early extra oil change to help flush out any debris (more on this later) that might have gotten into the motor during the repair.

### *Tools and Bearing Pullers*

The big problem with this job is getting the old bearing out of the motor without splitting the cases. It's a simple press fit into a big hole in the left side of the motor cases. KTM never intended for the bearing to be pulled with the motor intact - the motor shop manual doesn't specifically discuss pulling the bearing, but it does discuss installing it by heating the case half, freezing the bearing, and using a hydraulic press to put it in from the inside towards the outside. Obviously, they intend for you to split the cases to get to this bearing. There isn't any KTM-specified puller to pull the bearing in-situ.

So unless you want to split the cases, you're going to have to improvise. What most of us have been doing is to make a homemade puller out of Home Depot parts and if you take your time and are careful, you'll probably be successful. But if you're the impatient type who thinks torque wrenches and shop manuals are for sissies, you might want to farm the job out to a KTM dealer or try and find a bearing shop that has a commercial puller that will work. But be forewarned: Most KTM dealers will first tell you the swap is totally unnecessary and/or want to split the cases to do it "by the book." If you find a dealer who has the right tools and is willing to do the work at low cost, please let the community know. If any of my local dealers had been willing to allow me to trailer the bike to them with the bearing ready to pull for \$100 or so, I would have saved myself a lot of trouble and aggravation and had them do it.

The following two commercial "blind bearing pullers" have been ID'ed as appropriate for the job although I have no experience with either:

- Facom U23J2 Light Engineering Puller
- SKF Blind housing puller kit TMMD 61

Below is a picture of the SKF puller:



### *Getting To the Bearing*

This is basically the standard clutch removal process:

1. Remove seat, top fairing and fuel tank (not absolutely necessary, but makes the job easier).
2. Remove gearshift lever and kickstart lever. Alternatively, you can just tie the kickstarter lever down and out of the way and leave the gearshift lever attached (although it is nice to have it out of the way and can easily be popped back on to engage a gear). The kickstart lever clamp is secured with an allen bolt clamp and the gearshift has a small bolt. The gearshift lever wedges onto a tapered/splined shaft so it may be a bit reluctant to come off - it took some WD40, heat, and rocking from side-to-side for mine to pop off.
3. If your bike has a fuel pump, remove two bolts securing fuel pump bracket and tie the fuel pump up and out of the way. It's a good idea to keep track of which bolt goes where as they vary in length and what spacers and washers are on each one. (I Sharpie'd a number next to each bolt on the clutch cover and used a Costco plastic tub like they sell salad fixings in to keep track of the bolts and washers.)
4. Remove oil hose banjo bolt at top/forward of clutch cover and tie the oil hose out of the way. Try not to lose the small sealing washers on each side of the banjo fitting as they're hard to find in this small a size. KTM says to replace them on every removal, but I've never had any trouble reusing them and nobody that I can find routinely stocks them.
5. Remove the remaining bolts and pop off the clutch cover. You may need to tap on the cover with a plastic hammer to get it to break loose, but it shouldn't require much force - if it is hard to get off, check for a bolt you might have missed.
6. Unscrew the six clutch pressure plate bolts a little at a time in crosswise fashion. I kept track of which bolt/washer/spring went in each hole in the clutch pressure plate but it probably doesn't matter.

7. Remove the clutch pressure plate, push rod, and clutch discs. I did them all as a unit but you can do them one-by-one. But keep the clutch discs oriented inside/outside and in order as the inside friction disc is different from the others and the steel discs have an inside/outside orientation that is important.
8. At this point, you're looking at the clutch hub. You'll see a big o-ring at the bottom of the hub. I just left mine in there, but you can take it off if you like. It is very important on reassembly to make sure that this o-ring sits on the inside of the first clutch disc you put back so that it is encircled by the disc. That's why it is important not to mix up the clutch discs.
9. Pound down the locking tab on the clutch hub nut with big screwdriver and/or drift.
10. Remove the clutch hub nut. KTM recommends you have a clutch holder special tool to hold the clutch hub, but there are two work-arounds: a) use an impact driver; or b) put the tranny in gear and lock the rear wheel somehow. I did (a) for removal, and (b) for torquing the nut to spec on re-assembly, simply putting a stick of wood between the spokes and swingarm. (Someone else suggested using the rear brake to hold the wheel which sounds like a lot better plan than risking broken spokes.)
11. Remove the lock washer and the inner clutch hub then the outer clutch basket. There is a washer and needle bearing behind the clutch that may come off with the hub or stay on the shaft. Again, keep track of order and orientation.
12. Remove the kickstarter gear. It just slips off, but it is asymmetric from front/back, so make sure you keep track of which side faces out.
13. Remove both the oil pump gears. The gears just pop off after removing the circlips (they may be a little stuck), but watch out for the needle pins which go through the pump shafts which can fall out when the gears are removed. There are also thin washers on each pump shaft behind the pins, but they'll tend to just stay on the shafts. According to KTM, 2002 and later bikes use the same size oil pump gears, but earlier ones are different size. Regardless, I'd keep track of which goes where.
14. Remove the two allen bolts holding the main shaft bearing retainer and remove the retainer.

At this point, you're ready to pull the bearing.

Continued ...

#2

### [markjenn](#) *Building a Puller*

If you read all the published experiences of people who have done this repair, one thing stands out: Getting the old bearing out was pretty easy for some and a total PITA for others. I suspect that the manufacturing tolerances affecting the OD of the bearing and ID of the hole in the cases are the main reason why some bearings hold on for dear life and others pop right out.

My take is that mine was a little harder than most to remove. Another advrider.com reader kindly gave me his puller hooks ground from 1/4" Grade 8 bolts and since they worked on his bike, I was confident they would work on mine. They failed miserably.

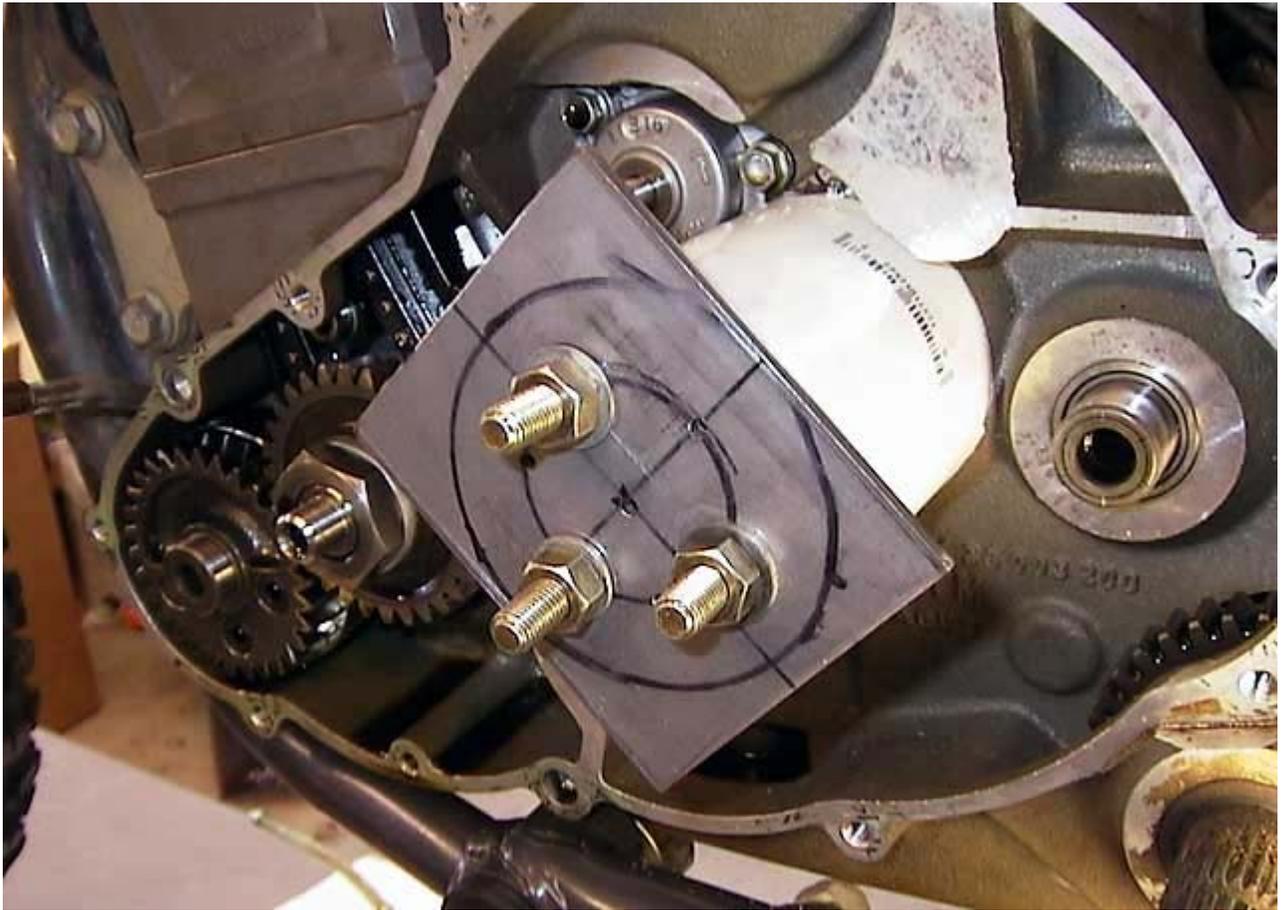
After a lot of trial and error, what finally worked for me was to build a puller using 2" PVC pipe fittings, three 4" length 5/16" Grade 8 bolts with fine thread nuts, and a 3"x3" piece of 1/8" steel. The PVC fitting goes over the main shaft where it acts as a standoff for the steel plate through which the puller hooks go to be tightened by the nuts. You will probably need some washers as well unless your bolts have a large distance threaded to take up slack as the bearing comes out.



Some have had luck with only two puller hooks, but many have reported that they couldn't get it out with two but could with three. I strongly recommend just using three from the get-go. More on making the pullers below.

Another approach is to grind pullers from bolts and attach them to some sort of slide hammer. This didn't work for me, but my slide hammer was just threaded rod on which I was sliding huge sockets and probably had too much stretch and give. Another idea that worked for someone was to weld threaded rod to the outer race and then beat on that with a slide hammer. Personally, I liked the slow/controlled aspect of using threaded puller bolts in a standoff, but the slide hammer approach has been successful for some.

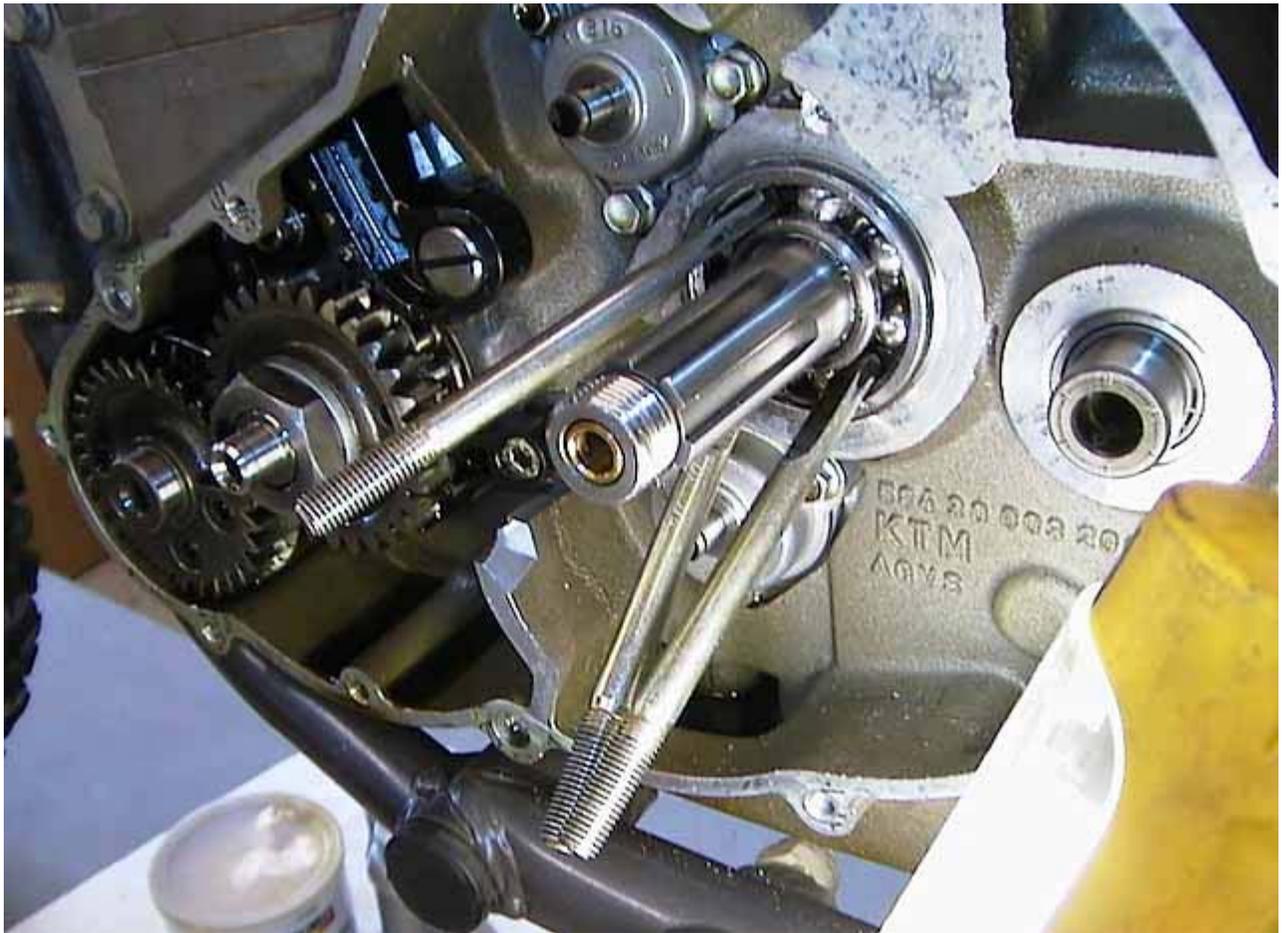
My standoff used a splice fitting for joining 2" PVC pipe and had an ID of about 2-1/4" (the bearing has an OD of 2") and a length of slightly less than 3". As is, the fitting was slightly too short to use with my 4" bolts as the steel plate would start pushing on the end of the main shaft during the pull, so I found a black plastic waste pipe cap fitting that just fit into the end of the PVC fitting. This worked nicely as it reinforced the top edge where the steel plate was pushing and added another 1/4" to the height of the fitting. After pounding it in, I drilled out the cap with a hole saw. I also slightly relieved the bottom edge of the fitting that goes against the motor to clear a boss near the top oil pump so that it would sit on the motor case evenly. You could use a lot of different things for a standoff, but you do want it to fit flush against the motor, be big enough to clear the bearing OD, and tall enough so that you're pushing against the standoff, not the end of the main shaft.



Many think that it is Okay to push against the main shaft as you pull the bearing and that's the way commercial pullers typically work, but I personally feel this should be avoided. I don't know what resists axial loads on the main shaft inside the tranny and others have been problems where the main shaft "binds up" either during the pull or while the new bearing is being pushed in. If your standoff is long enough to clear the main shaft, then it is a non-issue, at least during the pull, as the mainshaft never sees any stress whatsoever.

You can use anything for the end plate as long as it holds up to the pulling. I initially tried using a strip of 1/8" x 1-1/2" steel that was a little narrower than the standoff so that it wasn't bearing on the standoff all the way around it, and it deformed and bent permanently during the pull. When I used a 3" wide strip that completely covered the standoff, this problem disappeared.

You might note that the three puller holes in the plate are not drilled equally around the circumference. This is because the pullers are not going to be spaced equally around the bearing race as there are seven ball bearings and seven doesn't divide equally by three. To be precise, each ball is spaced at about 51.5 degree intervals, so with three hooks spaced as equally as possible, the spacing between hooks works out to be 103-103-154 degrees. If you just use 120 degrees, you'll probably be fine, but after many failed attempts, I got out a protractor and made sure I drilled the holes such that each puller was pulling as straight as possible. The puller holes should be on a circle of about 1-1/2" diameter which is midway between the inner and outer races.



### *Removing the Outer Bearing Cage (if required)*

Some have managed to pull their bearing by leaving the bearing cage intact and wedging small puller hooks into the tiny gap between the outside bearing cage and outer bearing race. I had zero luck doing this. The amount of "meat" left on the hook after I made it small enough to fit into this narrow gap simply wasn't enough to resist pulling out when I started the pull. I tried hook after hook and they all failed. But go ahead and give it a go if you want. As I said, mine acted tighter than most.

Removing the outer bearing cage is straightforward, but it is worrisome as you're probably going to be grinding and drilling into the side of your motor. And certainly once you start whittling away at the cage, you're past the point of no return - the bearing has to come out, one way or the other.

I used a dremel tool to first cut the cage at a high point over one of the balls. This created a "break" in the cage so I could pry the cage up and get some pliers on it to help pull it out. Then is used a fairly large drill bit (just slightly smaller than the gap between the bearing races) to drill out each of the seven rivets in succession holding the two cage halves together between the balls. You just need to drill out some of the rivet head and then pull hard on the cage and the rivet gives up. You work your way around until the entire cage pulls out. There is no need whatsoever to drill through the rivet to the other side. The cage on the other side stays intact, so you don't need to worry about dropping it or a rivet into the tranny.



It is a good idea to try and minimize the debris getting scattered around in this cage removal operation. I used tape, rags, and grease to keep the debris generally on the outside of the motor and went over everything at the end with compressed air. Even so, when I did an oil change at 20 miles after the repair there was some fine grit and metal shavings in the sump screen and magnetic sump plug so I doubt one can totally avoid getting some debris into the engine. Fortunately the LC4's double filters, screen, and magnetic sump plug should form an effective 2nd line of defense. With a few hundred miles on my engine after the repair, I'm not having any problems.

Another person reported that they managed to pry up the cage in the spots where they wanted to place pullers. This might be a good way to avoid grinding/drilling.

### *Grinding the Pullers*

The most critical part of a successful bearing pull is getting puller hooks that just barely fit into the space between the bearing races while leaving enough hook to catch the outer/curved race and not deform so much that they pull out when you start cranking on them. I made a lot of hooks before finding ones that worked for me. I wouldn't have high expectations that your very first one will work as you get better with experience.



Here's the process (assuming you've removed the outer bearing cage and are using 5/16" bolts - if not, then you are going to be working with much smaller hooks although the principles are similar):

1. Grind opposite flat sides of the bolt head hex down to the shaft OD. This establishes the width of the puller hook that will just fit between two adjacent balls in the bearing after shoving them apart a bit. Try and keep the ground sides flat and parallel. When you're done you'll have a mostly rectangular head with shallow points at each end.
2. Grind one of the shallow hex points down to the shaft OD, perpendicular to the two sides you ground in step 1.
3. Grind the remaining hex point just slightly to turn the point into an arc that will match the arc of the outer race. Avoid making it shorter.
4. Grind the top of the hex to shorten the bolt head from 3/16" tall to 1/8" tall. Err on the side of too little - you can take off more later.

During grinding, wear gloves, use a flat piece of scrap wood as a push block, and douse the bolt in water often to keep it from overheating. (And wear safety glasses of course.) There is a lot of grinding involved, so it will take a while, especially if you don't have a very big grinder.

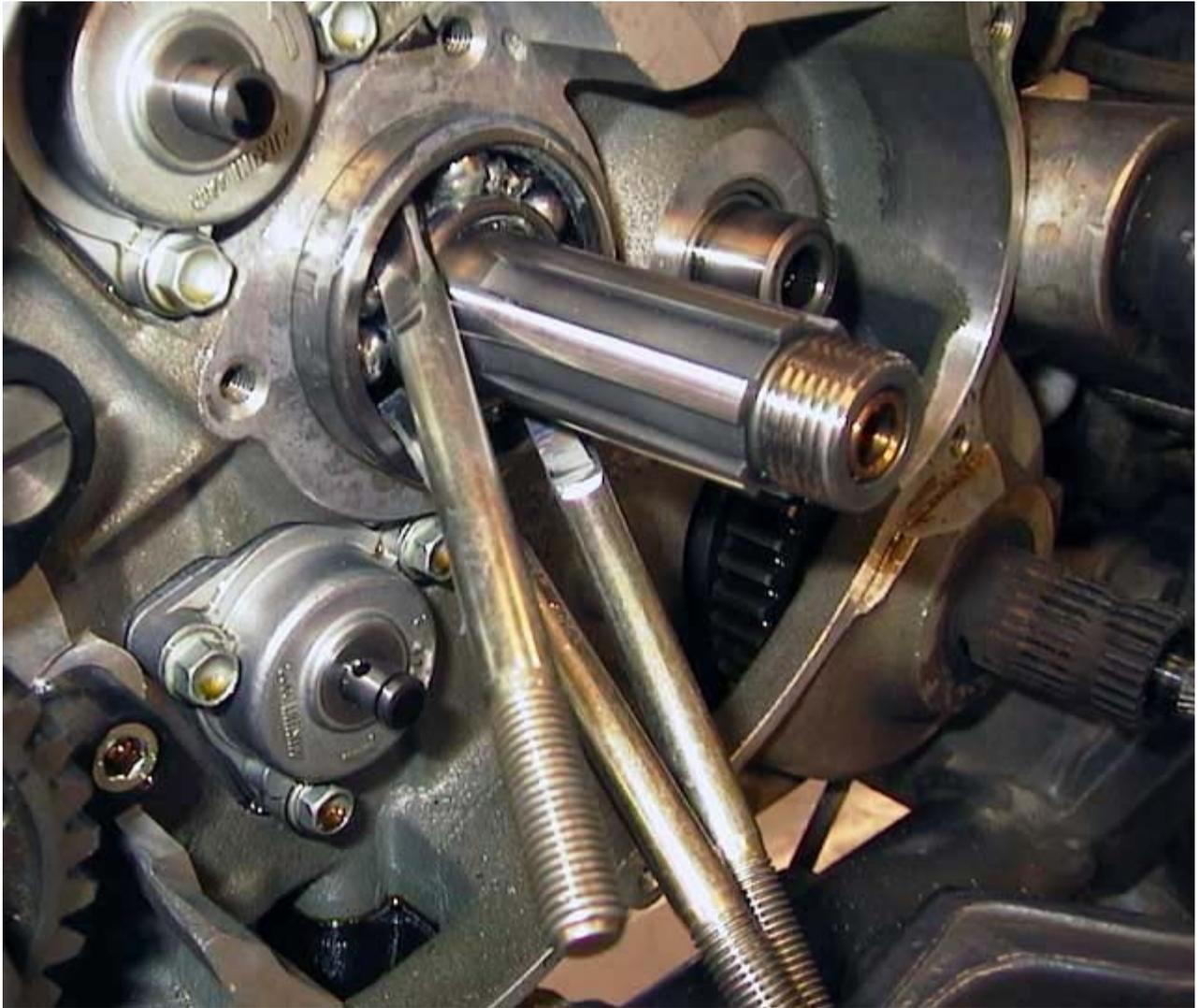
At this point, you've got your basic hook. The only problem is that it is too wide to go into the gap between the inner and outer races. But try anyway to get the idea of what you need to do next. Hold the bolt at an acute angle with respect to the engine cases (more parallel to the case face rather than the main shaft) and attempt to get the hook into the outer race. It won't go, but your job now is to grind, try, grind, try, etc. until you just get it to barely fit.

The grinding you need to do is to narrow the bolt shank (not the hook) enough so that it will just barely fit between the races. I ground approximately equally on both sides until the shank was about 3/16" wide, but you need to do it incrementally. When they go in, they'll suddenly go in, so you need to work slowly. Some folks report that they wedge them in and use tie-wraps to pull them parallel to the main shaft, but once mine went in, they didn't require any force to pull them parallel to the main shaft. If you have to use a lot of wedging force, you may pinch the inner race down on the main shaft which isn't good.

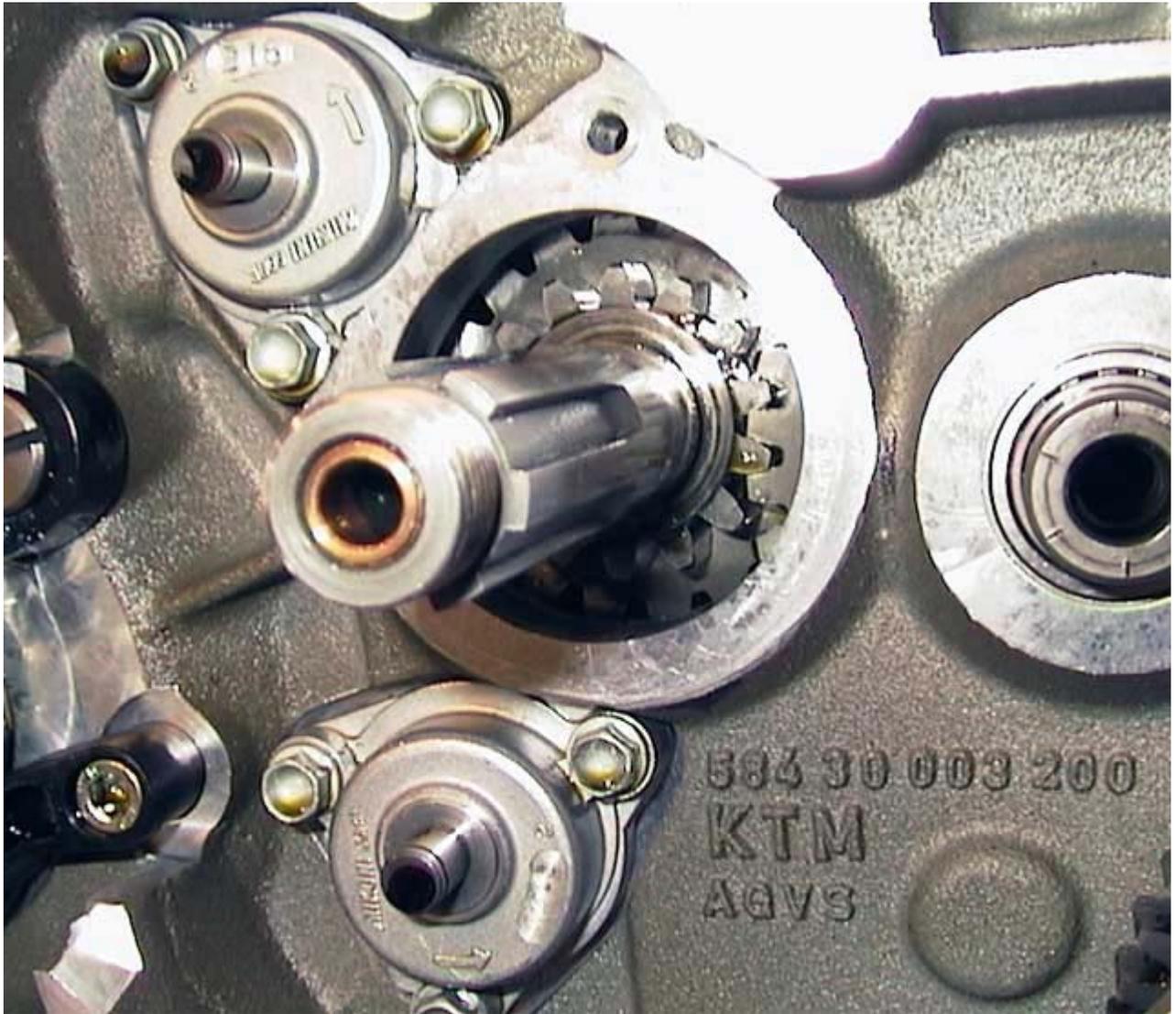


### *The Pull*

Once you've got your tool together, the pull should be anti-climatic. Make sure things are aligned, go slowly, and torque each nut a little at a time. Putting a drop of oil on each nut thread should reduce the torque on the pullers, but if you've ground your pullers precisely, they should not be able to turn since a flat side is bearing directly on the inner race.



A big question many have is whether to use heat or not during the pull. I rigged a heat gun to blow hot air on the case for 30 minutes or so during one of my failed pulls and it didn't seem to help. Others have heated the case with a propane torch. Whatever you do, it is very difficult to get enough BTUs to significantly heat the case and whatever heat you apply is going to heat the bearing too.



I also used Radio Shack freeze-spray on the bearing during both my successful and unsuccessful pulls. I doubt it made much difference, but you never know. It can't hurt.

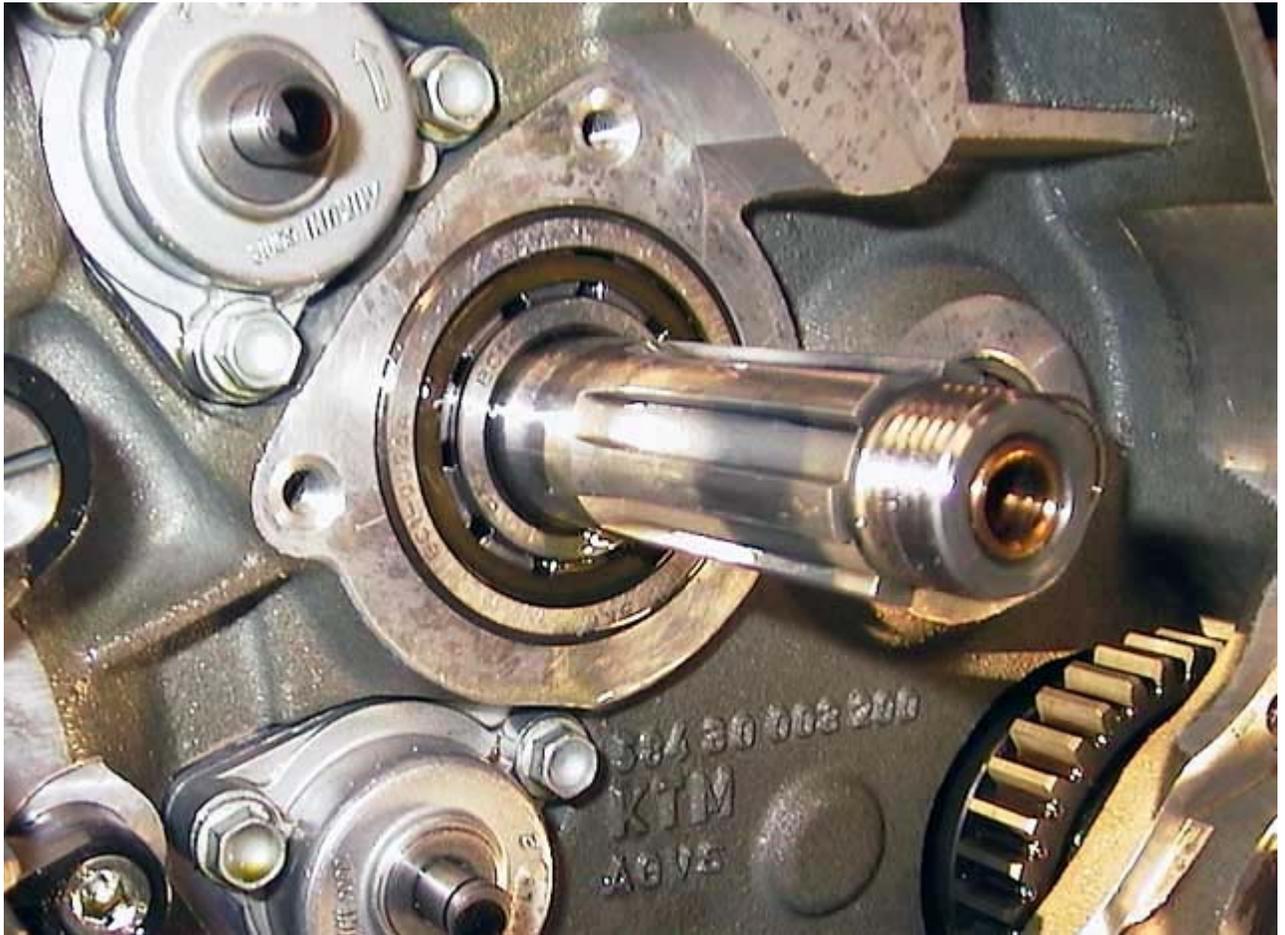
### *Putting the New Bearing In*

The new roller bearing has an inner race "top hat" and a washer that go over the main shaft. You have a choice here: a) Slide the washer on first, then push the bearing in, then place the inner race; or b) inner race, then bearing, then washer. Both methods have been used and work fine and I couldn't find anything in the 2003 KTM parts diagrams that showed the new roller bearing as anything other than a single piece so they were no help on what order to assemble the bearing. It probably doesn't matter.

However, if you do it via method (b) you won't be able to remove the inner race without getting the bearing out. And without the inner race removed, your chances of being able to pull the bearing again (heaven forbid) from the outside are probably nil. So for reasons of future repair accessibility, I think (a) is the preferred method.

To drive the bearing, ideally you'd want a big bearing driver that goes over the main shaft, but all of us have simply hammered the bearing in with a dowel of wood, going very slowly and working carefully around the circumference, making sure it goes in straight. You can use the old bearing as

a driver also although I didn't. Freezing the bearing ahead of time is probably a good idea, although I forgot to and managed to get it in Okay. Make sure you hammer only against the outer race, not against any of the rollers and make super sure you get the washer in there before you start. Once the bearing starts into that hole, it ain't coming back out without a lot of trouble.



Very important: I had initially assumed that the bearing seated onto a lip in the case halve which established how deep it could go. It does not - the hole in the case is just a plain hole with no lip. Thus, you can overdrive the bearing such that it pushes against the gears on the main shaft and binds the shaft. Someone in this forum did this and had a hell of a hassle getting the bearing to back up enough to free the main shaft. Don't overdrive the bearing!

KTM wants the new bearing, like the old, to be just flush with the machined case surface that surrounds the bearing. Their instructions for pressing in the bearing with the cases split say to first mount the bearing retainer on the outside and then push the bearing in from the inside until it contacts the retainer. So you want it to be flush with the case BUT THAT'S ALL. Go very slowly and repeatedly check to be sure the main shaft is free. Many have reported that it binds up a bit at times, but hammering on the end frees it up. Mine remained free the whole time. Once you've got it reasonably flush and the main shaft is free, put the retainer on, pop the inner race in, and call it a day.

### *Re-Assembly*

As the tired saying goes, "Re-assembly is the reverse of assembly." Here are some things to watch out for:

- In the shop manual, KTM specifies 243 Loctite (blue) for the small two bolts holding on the bearing retainer and the big nut holding the clutch hub on. But in the parts diagram, they specify 648 high-temp Loctite. I used Permatex high-temp stuff I found at the local auto parts store for both. The critical clutch hub nut is locked with the lock tab washer too, so KTM must believe in both a belt and suspenders for this fastener.
- Another manual discrepancy (all too typical for KTM): KTM specifies a torque of 100 Nm (60 ft-lb) for the clutch hub nut. The only problem is that 100 Nm is 74 ft-lb, not 60 ft-lb. (Maybe the guy who wrote this also wrote the software that caused one of our Mars probes to miss the red planet due to a bad unit conversion.) I compromised and used 90 Nm (66 ft-lb). As mentioned earlier, if you don't have a tool to hold the clutch inner hub, you'll need to lock the rear wheel somehow (brake, wedge in spokes, whatever) and put the tranny in gear to torque this nut.
- When you put in your clutch discs, make sure the first disc you put back in is the same as the first one you took out - DON'T MIX THIS DISC with the others. It has a slightly larger ID to clear the o-ring that sits in the clutch hub. In addition, you should be careful not to flip the steel discs as the service manual says "Mount all steel discs with the sharp edge facing downward." (I assume "downward" means "towards the engine". I just put things back together exactly in the order I took them out and didn't look at the steel discs so I'm not entirely certain what they're talking about.)
- According to KTM, the two oil pump gears were different sizes up to 2001 models, but the same beginning in 2002. On my 2000 they were definitely different sizes. In any event, I'd suggest you put them back as you took them out.
- As to the rotational timing of the parts you put back in, I don't think it matters for the oil pump gears, kickstarter idler gear, or clutch basket. There is no need to "time them" with the crank or each other. (The balancer shaft gears do have to be timed, but you shouldn't have fooled with them.) But there is a gotcha on the clutch pressure cap where you have to align the small hole near the center with a pin on the clutch hub so they lie over one another. I have no idea what this does but some have not done this and had clutch problems.

Oh, the joys of KTM ownership!!

I'm sure I've missed some things (comments welcome and I'll revise any mistakes and update with further suggestions), but I'm probably risking a server crash with this treatise as it stands.

Ride safe,

- Mark

Yesterday, 06:41 PM

[#3](#)

[Drif10](#)

Quote:

Originally Posted by **markjenn**

*Very important: I had initially assumed that the bearing seated onto a lip in the case halve which established how deep it could go. It does not - the hole in the case is just a plain hole with no lip. Thus, you can overdrive the bearing such that it pushes against the gears on the main shaft and binds the shaft. Someone in this*

*forum did this and had a hell of a hassle getting the bearing to back up enough to free the main shaft. Don't overdrive the bearing!*



I was using the old bearing to drive in the new, and I was going really easy, no shit. That's why I was so confused by the level of the problem I had. Took me 3 days of coming up with new ideas/methods on my own and from the inmates here to get it freed up without splitting the cases.

Yesterday, 06:49 PM

#4

[creeper](#)

Absolutely excellent Mark!!! 🙌

I don't need the bearing upgrade, but if I did, I'd read your guide about 4 times first before I started. 🙌

That puller in the photo is I believe the \$700 SKF Blind housing puller kit TMMD 61.

Again, great job... well worth installation in the WOW. Rad, you see this? 🙌

Later,  
Chris

Today, 12:35 AM

#16

[LC4 Pilot](#)

Thanks Markjenn! Great writeup!

I'm about to do this as soon as my bearing gets here from Chip Munn... it's been about 6 weeks, but he swears that it will get to me this week.

LaramieLC4-640 on KTMTalk made a bearing puller kit - complete with ground bolts which I am now in possession of. It will be a traveling kit that will make the rounds. I will use it when I get the new bearing and post my results. If you want to get on the list to have the kit sent to you, go to KTMTalk, and put yourself on the waiting list on the thread:

<http://ktmtalk.com/index.php?showtopic=44168&st=0>

I think page 11 is where you will find the details.

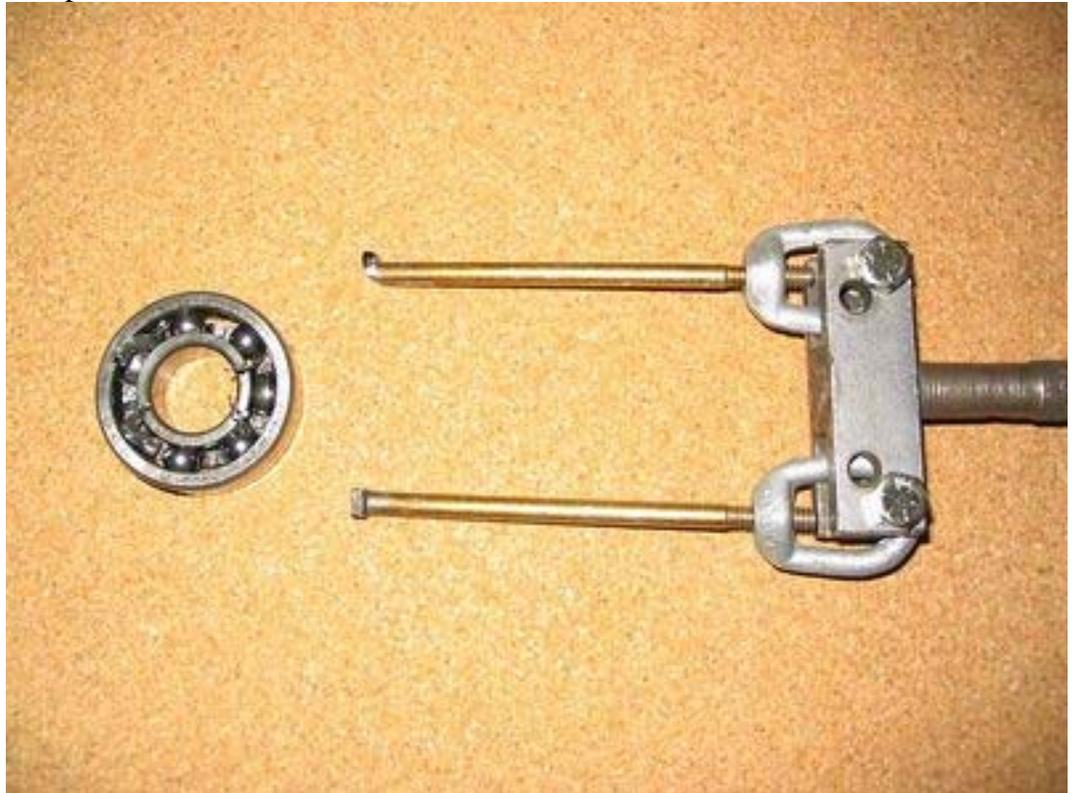
I'll be sure to re-read your how to several times before and during the operation.

Today, 07:06 AM

#19

[Stobie](#)

I tried the same puller method as you did, Mark, and ran into the same problem--if the hooks would fit, they would straighten. Not enough "beef" left. I eventually used a tiny pry bar to tear the cage, and peeled it back with needlenose pliers, then ground two hooks that were stout enough that they would barely fit, and allow me to pull them parallel to the shaft. I then put some 1/4-20 shackles on the ends of the hooks, and attached them to a slide hammer. You can see how the cage is peeled back in the first photo.



I then heated the engine case with a heat gun (no torch at home) for 15 minutes

before using the slide hammer. The first two shots with the slide hammer had the bike go "scooouch" across the concrete. The bearing finally moved on the third shot, and then came out pretty easily.

Some of these bearings are easy to pull, some are incredibly tight. I know of one guy here in NC who had to weld a piece of pipe to the outer bearing race, and then pull it by attaching a slide hammer to the pipe.

Today, 03:05 PM

#24

[Rad](#)

Quote:

Originally Posted by **dagwood**

*anyway...didn't mean to stir the munn pot again but damn how many bad threads about him do we suffer thru. thats one reason I stopped ordering from KTMTalk. the discount wasn't worth the headache and waiting.*

My local shop is worse to order from than Chip; where else can ya mail order KTM parts?

[dagwood](#)

Quote:

Originally Posted by **Rad**

*My local shop is worse to order from than Chip; where else can ya mail order KTM parts?*

KTMHutt. formerly Cyclehutt.com  
never had to wait more than three days. The best

H&H in Georgia but other issues there. (long story from KTMTalk)

theres a few out there.

my local shop used to really suck but they have a new parts manager (the kid looks about twelve but sharp as a tack) and are getting better. I've been trying to buy from them If at all possible. never had to order anything from them yet but haven't tried getting the bearing

Today, 03:20 PM

#26

[Rad](#)

Quote:

Originally Posted by **dagwood**

*KTMHutt. formerly Cyclehutt.com  
never had to wait more than three days.*

This place, thanks <http://www.ktmcyclehutt.com/> 