

This applies to the '02 and newer models only. Mostly from James Dean with some added information from jeb. Updated on 5/10/2005 with the latest "best practices".

Drain the radiators. The drain bolt is an 8mm headed bolt with copper crush washer located under the left headpipe on the front of the motor. Remove the water pump cover and impeller to access the seal carrier and seals. The impeller may give you some trouble getting off even after you remove the snap ring. You just have to work it and it will come off. One tip to get it off is to remove the hose on top of the WP housing and using a flat screwdriver through the hole to get behind the impeller to gently pry on it. Rotate the motor while doing that, if needed, to get it loose.

Simply pulling the waterpump cover and impeller off is the quickest way to get at the seals and O-rings. The '02 and newer seal carrier, O-rings, and seals can then be removed with two m3x.5mm screws inserted into the carrier and pulling them outwards from the side. The carrier has 2 holes that are threaded for m3x.5mm screws. Purchase two screws 20mm or longer to have enough length pull on. Insert both screws and thread them in until they bottom lightly. Use pliers or vise-grips to evenly pull out the seal carrier.

It is very important to clean the surfaces well before reassembly such that the O-rings will have a good sealing surface and the sealant bonds. KTM suggests using Loctite 515 which is very thin and flows evenly around the O-rings and mating surface.

KTM also recommends using all new WP seal parts (carrier, 2 seals, 2 orings) and install them using the KTM "bullet" tool, KTM part number 590 29 005 010 which is about \$5 from www.cyclezonektm.com. You can wrap a piece of plastic, etc around the end of the camshaft before installing the seal, instead. The point is to avoid wrecking the seal on the sharp groove.

BTW, the inner seals are a VERY tight fit and it's very easy to mangle them trying to install them in the carrier. How do you get it in then? Contact Old Stroker. He has the 'TOOL' and he presses them in for individuals and dealers all over the US. Email him at OldStroker@sbcglobal.net

Another way to press the seals in is my "sizing" method. Put one of the seals into the carrier open side in. Drive it in as straight as possible with a socket/hammer or smooth jawed vise. Once flush, put the seal on top of a large socket and then use a socket that is just smaller than the seal opening to drive that seal all the way through. Now it's "sized". Repeat with another seal except stop short of driving it out the other side. Drive it through until the open side is flush with other side. Now insert the sized one open side out in the other side and drive it in until flush.

Some places, like Cycle Zone, send the carrier with the seals already pressed in. Nice touch.

Folks have good luck just replacing the orings and reusing the carrier with the existing seals.

The two orings are NOT identical on the 02+ bikes so take note of the size when removing them. Coat both orings with a light coating of the 515 sealant. A light coat of grease on the seal lips is a good idea, too. Put the bullet tool on the camshaft and insert the bigger oring into the opening all the way back. The seals and carrier need to be inserted squarely using light force, being careful not to pinch the outer O-ring. The hole in the center groove of the carrier should be up, according to KTM. I've done it both up and down and it does not seem to matter.

There is a small bevel machined on the head & rocker cover to help the installation. When you're pushing the carrier into the recess and the outer oring contacts the head, start working the oring into the groove of the carrier with your fingernails while putting a little pressure on the carrier until it slides into place. That will minimize the chance of nicking that outer oring as you seat the carrier.

If the carrier isn't flush or wants to pop out a little, put the screws in the carrier

and turn it back and forth a little as you push it in. That will seat that back oring correctly.

BTW, Don't overfill the radiator. The pressure rises much quicker with less air at the top of the radiator. KTM recommends setting the coolant level only 10mm above the fins (.4 in) inside the radiator. This may help reduce the cooling system pressure slightly.

Special tools needed would be the small metric bolts to pull the carrier, the bullet tool from KTM (if you go that way), small snap ring pliers for getting the WP impellar off and the Loctite 515 or some other brand of Anerobic sealer. Grease would probably work instead of the 515 in a pinch but I've not tried it that way.