

evoluzione cyclesports

installation instructions

billet aluminum clutch slave cylinder for ktm 950/990

part number 99030

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this **evoluzione cyclesports billet aluminum clutch slave cylinder** has been developed for high performance on and off-road use on the ktm 950/990 motors. important features include cnc (computer numerically controlled) billet 6061-t6 aluminum construction, double seal design and a 10 year warranty against seal leakage. this kit is easy to install and includes all necessary hardware for installation.

introduction

the **evoluzione cyclesports billet aluminum clutch slave cylinder** is easy to install by carefully following the instructions. [read all instructions first to familiarize yourself with the parts and procedures.](#)

installation

step 1. locate the clutch slave cylinder on the left side of the engine and wrap a shop towel around the body (to catch any clutch fluid leakage). place a catch pan un-

der the bike. using a 13mm wrench, slightly loosen (but don't remove) the banjo bolt holding the clutch line onto the slave cylinder.

step 2. with an 8mm socket wrench, remove the two bolts holding the stock slave cylinder to the engine. remove the stock slave cylinder and plastic spacer from the engine. pull the plastic spacer from the stock slave cylinder and set aside (it will be reused later). allow the stock slave cylinder to hang on the hose.

step 3. clean the area where the slave cylinder mounts, making sure to remove all chain lube, dirt and grease.

step 4. clean the stock plastic spacer and then push onto the **evoluzione cyclesports billet aluminum clutch slave cylinder**, making sure that the bolt holes line up. using the two supplied bolts, carefully mount the new slave cylinder onto the engine. tighten the two bolts with a 5mm allen wrench.

step 5. working quickly, carefully remove and discard the stock banjo bolt and the two crush wash-

ers from the stock slave cylinder and clutch hose. replace with the supplied banjo bolt and crush washers. install the supplied banjo bolt, crush washers (2) and the hose onto the new slave cylinder. snug up but do not tighten the banjo bolt.

step 6. adjust the alignment of the clutch hose and tighten the banjo bolt using a 14mm wrench, being careful not to damage the crush washers.

step 7. using the supplied bleeder cup and a 9mm wrench, completely bleed the clutch system using fresh mineral fluid.

spare piston seals

even though we expect many years of trouble-free service from your new slave cylinder, we understand that sometimes seals can fail and usually when you are miles from nowhere. that is why we have included a spare set of viton seals that can easily be replaced with a minimum amount of tools. if you ever need to replace the seals,

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simply remove the two bolts that mount the slave cylinder to the engine. next remove the snap ring holding the piston (caution: there is a return spring under the piston). remove the piston and spring from the slave cylinder and remove and discard the o-rings from the piston. carefully install the two spare o-rings on to the piston and reinstall the spring and the piston back into the slave cylinder (be careful not to damage the o-rings when inserting the piston). lastly, remount the slave cylinder onto the engine and tighten the two bolts - bleed as needed.

troubleshooting

the basis for hydraulic systems is that a fluid (in this case clutch or mineral fluid) is non-compressible. this means no matter how much you try to "squish" it, it will always occupy the same amount of volume. gases, such as air, are very compressible. if a gas is introduced into a hydraulic system, it will completely compress before the fluid can start moving. this is why your clutch can feel like it is "bled" yet you can't get it to operate correctly.

the most common problem with bleeding a clutch system is trapped bubbles. unless you do this for a living, you will most likely get air trapped in the system. though the clutch will feel like it is releasing, air bubbles will not allow full travel of the piston.

clutch bleeding tips

if after installation (and bleeding) the clutch does not completely disengage, you will need to do a complete drain and re-bleed. in our testing, we have found the most complete way to bleed a hydraulic system is to "back bleed" the system.

step 1. start by carefully removing the lid and bladder from the fluid



reservoir on the master cylinder.

step 2. make sure the fluid in the reservoir is at the "min" line - do not overfill.

step 3. remove the two bolts holding the slave cylinder on the engine and remove the slave cylinder. hold the slave cylinder with the front (logo) pointing up and gently push the piston back into the bore with your thumb. make sure and watch that the fluid does not rise too high in the reservoir. this will force any air trapped in the slave cylinder back into the line and master cylinder. reinstall the slave cylinder.

step 4. wrap some towels around the slave cylinder bleeder valve and attach the bleeder cup. with an open-end wrench, gently open the bleeder valve 1/8 of a turn. carefully pump the master cylinder lever several times until you get a steady stream of fluid coming into the bleeder cup (no air bubbles). note: you may need to fill the reservoir several times during this step.

step 8. fully close the bleeder valve and remove the bleeder cup and tubing.

parts list

slave cylinder kit
6mm x 55mm bolt (2)
bleeder banjo bolt
aluminum crush washers (2)
spare viton o-ring (2)
bleeder cup

tools required

8mm socket & ratchet
9, 13 & 14mm wrenches
5mm allen wrench
shop rags
catch pan
mineral fluid