

# evoluzione cyclesports

installation instructions

## billet aluminum clutch slave cylinder for rsv/rsv-r mille, tuono, falco & futura

part number 95031,32,33

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### this **evoluzione cyclesports billet aluminum clutch slave cylinder**

has been developed for high performance street and racing use on the rsv/rsv-r mille, tuono, falco & futura. important features include cnc (computer numerically controlled) billet 6061-t6 aluminum construction with 16.5% reduction in effort, triple x-ring seal design, ball bearing push rod pivot 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.** if applicable, remove the left side fairing, lower fairing and/or side cover. on the futura, remove the voltage regulator and mount.

**step 2.** lightly lubricate the o-rings on the supplied piston with brake fluid. install the piston into the clutch slave cylinder with the piston bore facing out. push piston in all the way until seated.

**step 3.** locate the clutch slave cylinder and wrap a shop towel around the body (to catch any clutch fluid leakage). place a catch pan under the bike. using a 14mm wrench, slightly loosen (but don't remove) the banjo bolt holding the clutch line on the slave cylinder.

**step 4.** working quickly, carefully remove and discard the stock banjo bolt and the two crush washers from the slave cylinder and clutch hose. replace with a sup-

plied banjo bolt and two crush washers. install the banjo bolt with the crush washers and the hose onto the new slave cylinder. snug up but do not tighten the banjo bolt. carefully clean off the slave cylinder and let it hang from the hose.

**step 5.** with a 5mm allen wrench, remove the three bolts holding the stock slave cylinder to the engine. pull the slave cylinder from the engine and allow the fluid to drain into the catch pan.

**step 6.** clean the area where the slave cylinder mounts, making sure to remove all chain lube, dirt and grease.

**step 7.** insert the supplied bearing into the piston bore, followed by the small rubber seal. carefully mount the slave cylinder on the engine, then hand tighten the two upper supplied bolts and original lower bolt with a 5mm allen wrench.

**step 8.** adjust the clutch hose and

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tighten the banjo bolt.

**step 9.** completely bleed the clutch system using fresh dot 3 or 4 brake fluid (see "clutch bleeding tips" section for more info). reinstall left fairing (or cover) if removed.

### troubleshooting

the basis for hydraulic systems is that a fluid (in this case clutch or brake 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 or brakes can feel like they are "bled" yet you can't get them 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

in our testing, we have found the most complete way to bleed a hydraulic system is to 1) make sure the master cylinder has a bleeder valve, & 2) "back bleed" the system.

**step 1.** start by completely draining your clutch system. carefully

remove the lid (and bladder if equipped) from the fluid reservoir. next, remove the banjo bolt on the slave cylinder and allow the fluid to drain into a catch pan. if you do not have a bleeder valve on your master cylinder, install one at this point (such as our **p/n 90040 - evoluzione cyclesports banjo bolt w/bleeder**).

**step 2.** carefully pour brake fluid into the reservoir up to the "min" line - do not overfill (do not spill any fluid - it is corrosive and can remove paint).

**step 3.** remove the three 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 **master cylinder** bleeder valve and attach the supplied 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 5.** fully close the bleeder valve and remove the bleeder cup and

tubing - be careful not to spill any fluid.

**step 6.** 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 - be careful not to spill any fluid.

### parts list

slave cylinder  
small rubber seal  
bearing  
banjo bleeder bolt  
aluminum crush washers (2)  
m6 x 55mm bolt (2)  
bleeder cup

### tools required

14mm wrench  
7/16" wrench  
4 & 5mm allen wrenches  
flat blade screwdriver  
shop rags  
catch pan  
dot 3 or 4 brake fluid (1 pt.)