

Read this if you want to thoroughly understand the lever function and adjustment.

The explanation below will go a long way towards understanding the lever and make it simpler for you to set up. But if this explanation gets too confusing then just **have faith** and skip to the end where the actual procedure is defined.

First of all, the lever is admittedly more technical to adjust than the stock lever. The reason for this is that the stock lever has only a portion of the total lever swing which is functional. The rest of the swing is wasted motion that separates the clutch plates further than is necessary to disengage the clutch and stop drag. This means that you can throw on the stock lever and it works just fine without any tuning. But the MME design uses the entire lever swing to go from complete engagement to complete disengagement with no wasted separation distance of the clutch plates. **Consequently, both ends of the lever stroke have to be adjusted and done in a specific sequence to get it right.**

The lever was designed to start from about the same position as the stock lever when released (fully engaged) and end at the fully squeezed position against the grip when the bike reaches the fully disengaged position. So in reverse direction the lever should fully disengage the clutch when squeezed tight to the bar but start to engage the clutch as close to the bar as possible as you start to release the lever. Then when the master cylinder piston reaches the end stop circlip the lever should be back to the same position as the stock lever. The tighter to the bar the engagement adjustment is as it begins to engage the clutch the shorter the reach distance will be when fully released. So you have to start the adjustment procedure with the clutch engagement position in order to minimize the reach distance.

One last thing you need to know to completely understand why the adjustment procedure is so specific is that the clutch will behave differently depending on temperature due to transmission oil viscosity. **When the bike is cold the clutch will drag more. If you attempt to adjust the clutch lever while the bike is cold you will require more lever travel than when it is hot.** The stock lever has so much extra travel that this is not an issue but the MME design was optimized to minimize lever travel partly by designing it for the normal operating conditions - *hot*. **As a result, you can expect the clutch to drag with my lever when the engine is cold, but this will go away as soon as the bike gets warm in the first couple minutes of a ride.**

It is critical to follow the specific order of the adjustment steps.

1. Install the lever. Blue LocTite was applied at assembly but re-apply to the adjusting screws as needed. Once adjusted properly you will not need to re-adjust until you change your clutch disks or possibly the hydraulic fluid.
2. Warm up the bike! The hotter the better. Just go ride a bit. You don't have to adjust first. The clutch might drag or slip but this will just warm up the engine a little faster and won't hurt the clutch as long as you don't abuse the bike. Even if the clutch seems fine without any adjustment **PLEASE do not skip the following steps and if still tempted AT LEAST skip to step 6 and read step 7.** Then position the bike on a flat level surface with a rider in place. **Do not do this adjustment with a cold bike on a stand.**
3. Start the bike and grab the clutch and put the bike in 1st gear. Hopefully the bike will have some clutch drag to start and try to drive the bike forward or at least drag the engine RPM's down. If not, then you may already have the piston rod extended too far so put the bike in neutral and back out the set screw a half turn or until the clutch drags when you put it back in 1st gear. Then go to the next step.
4. If you do have a bit of clutch drag then put the bike in neutral, release the lever to gain access to the adjustment and turn the set screw in (righty tighty) 1/8 turn at a time. **A little bit goes a long way in this adjustment.** Grab the clutch and put the bike in gear and re-check for clutch drag.
5. Repeat this until the clutch drag just goes away and you can sit on the bike without restraining it from driving forward. The bike likely will lurch a bit when popped into gear but then it should not require any effort to restrain it.
6. Now put the bike in neutral and pinch the lever at the far end and give it a wiggle. If the lever is loose or sloppy then squeeze the lever to the bar to gain access to the freeplay adjustment screw and back it out a bit. Release the lever and check for freeplay. If the lever is tight when you wiggle it then drive the screw in a bit and recheck. You can set the free play so that there is no wiggle in the lever but don't allow the lever to displace the master cylinder piston in the bore or the bleed port in the master cylinder will be blocked preventing fluid flow between the reservoir and the line volume. Most importantly you will cause the clutch to slip under high load conditions. **Clutch slippage**

causes burned clutch plates under high load conditions such as high-speed runs, hill climbs, or wallowing in sand or mud. You won't feel clutch slippage in 1st or 2nd gear until damage is done.

7. Any time you adjust the engagement set screw you must also recheck the free play adjuster. If you back out the engagement set screw to adjust the piston rod shorter you will gain free play and can tighten up the free play adjuster. More critically, if you adjust the engagement set screw extending the piston rod further - in order to disengage the clutch more, then you will be losing free play and will have to turn in the free play adjuster to relieve pressure on the clutch plates. ***IF YOU LOSE TOO MUCH FREE PLAY YOU ARE ACTUALLY RIDING THE CLUTCH AND YOU WILL BURN THE DISKS.*** This is easy to prevent if the last thing you do is to make sure the lever can travel away from the bar far enough to stop pushing on the piston rod.

Lastly, a reminder, adjust the bike while **hot**. Then **EXPECT** that the bike will have some clutch drag next time you start the bike with a cold engine. **Do not try to adjust this out.** Just go ride and in the first couple minutes the drag will go away.

Bleeding the clutch and brake lever.

There is a tiny port that allows fluid to flow from the reservoir to the line volume or vice versa. If the piston is prevented by the free play adjuster from being pushed back to the circlip then the piston will occlude or completely block the port and no fluid will flow. This makes bleeding very difficult or impossible. In the case of the traditional top down bleeding procedure you will be able to pressurize the line, crack open the bleeder valve to drain fluid but when you release the lever the reservoir will not add fluid to the line since the port is partially or fully blocked. In the case of bottom up bleeding you will not be able to push much fluid up the line into the reservoir if it is blocked. The easiest procedure is to remove the lever and bottom up bleed. To do a traditional bleed you will need to make sure you have some freeplay in the lever before you start the process.