



Slider Clutch Installation

M.T.C. Engineering's slider is designed to provide you with excellent reaction times and better E.T.'s. Once you become used to racing with our slider clutch, you will never return to the conventional hand clutch method. Slider clutches eliminate the need for the clutch lever, cable, slave cylinder, etc. The unit operates wet and is totally enclosed in the stock clutch cavity with the addition of a specially designed cover plate. This unit operates similar to the one used on top fuel motorcycles and allows you to set the stall speed and the weight required to lock up the clutch plates in accordance with the horsepower your engine produces. It does not come with oil fill caps. All MTC Sliders and components are covered under U.S. Patents.

WARNING

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There are several things that need mentioning before you use this slider clutch so you will not make any mistakes.

1. The clutch releases when the engine R.P.M. drops below stall speed. If your throttle sticks open, you can not disengage the clutch.
Turning off the ignition switch is the only way you can disengage clutch if the throttle sticks open.
2. The bike will free wheel when the R.P.M. drops below stall speed, so you can not use the engine to assist the brakes in slowing the bike.
3. Any mechanical frictional hang-up would prevent the clutch plates from disengaging.
4. Make sure the transmission is in neutral before starting the engine.
5. Make sure that you can reach ignition kill switch without removing hands from controls.
6. Make sure air gap is correct, if not install a shim kit.

1. INSTALLATION OF BASKET IN A GS1100/1150

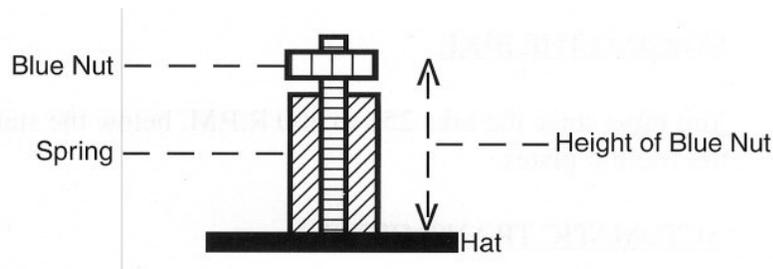
- A. When installing a GS1100/1150 slider basket, it will require you to check clearance of the cases to prevent the O.D. of the basket from touching the inside of the clutch cavity, a minimum of 1/32" is required.
- B. Installing the clutch basket to the transmission shaft and installing clutch cover is the same as with the stock engine. With the Suzuki engine, you won't need the clutch cable, lever, and outside cover. The GS1100/1150 engines may require shimming of the clutch basket end play to provide .003 to .006 clearances. Follow GS 1150 shimming procedures, the correct shims are available at your favorite Suzuki supplier (see 1984 Suzuki GS1150). The GS1150 has a shorter primary drive gear spacer with (2) 6mm tapped holes. If you don't have .003 to .006" clearance the inner hub will not rotate when the nut on the input shaft is tight. If the basket is too loose the basket will have excessive end play which could cause damage to clutch or engine.

- C. Replace the hardened steel spacer that goes between the face of the clutch basket and the inner hub with the three (3) piece needle bearing spacer supplied with your unit. Any shims needed to increase endplay should be installed before the 3 piece bearing set. **Make sure the needle bearing faces the clutch basket.**
- D. Install friction and metal plates same as with stock procedure except start with a fiber then hard chrome plated steel then fiber then hard chrome plate continue till you end with fiber. Suzuki has 8 steels and 9 fiber plates. We recommend all hard chrome plates for the serious racer. If you want the bike to cut good lights make sure the air gap is .050". If it is not 0.050", use a shim kit to get the correct air gap. The "**new**" design of GS slider has an inner hub with no lip on the back side and a spacer ring bolted to the bottom of the basket. You can shim this design by using shims that fit under the spacer ring instead of inner hub.
- E. Place the hat assembly on the basket and tighten the twelve (12) allen head cap screws to secure it.
- F. Before starting engine turn engine over by hand, and make sure that basket or inner hub is not binding.

2. ADJUSTING THE SLIDER CLUTCH

NOTE: This procedure can most easily and safely be done with the rear wheel suspended in the air. Sliders that are set up at MTC should work for a bike that runs 9.20s. Try it before you adjust it.

- A. Start by setting the height of the springs at .800 thousandths. Put outside cover on engine and start engine. Put gear box in low gear and check the R.P.M. at which the rear wheel starts to turn. If the R.P.M. is too low, increase the spring pressure. Loctite blue nuts after adjusting, or use self locking nuts. They will loosen up.



- B. We recommend .050" air gap for all sliders. To determine air gap subtract the step on slider hat pressure plate from stack height. Example GS1100 Stack Height .100 Subtract Step on pressure plate .050" Equals Air Gap .050" KZ/Hayabusa Step .032"/ GS1100 .050"/ ZX-12 .055"/ GSXR 1000 & 1100 .065". For accuracy reasons we suggest you measure your hat step.
- C. To determine stack height measure from last fiber plate to top of the basket.(not clutch tab).
- D. If you have excessive air gap your slider will not react. You will not be able to cut good lights. Take the time to get it right, we have shim kits available to help you with the adjustment. Think about it, your competitor is not going to tell you why they are cutting good lights.



3. SETTING THE LEVER ARM WEIGHTS

- A. For the average bike the weight supplied with the unit is more than enough to lock up the clutch and provide the stall speed you need to do the job. Remember the name of the game is to lock up the clutch as soon as possible without blowing away your rear tire. Also, if you change the lever arm weights, you will have to re-adjust the stall speed.

4. PROCEDURES FOR MAKING A PASS

1. BURNOUTS

- A. You can use your 2 step button like you're leaving the starting line, or start the rear wheel spinning rapidly by quickly opening the throttle and hold the R.P.M. at least 2000 R.P.M. above the stall speed you have selected to prevent burning up the friction plates. If possible pick your body of the seat to start the burnout then sit back down. Do not allow bike to burn out of the water onto dry asphalt as this will shock the clutch plates and may break the tabs off of the friction plates.

2. STAGING THE BIKE

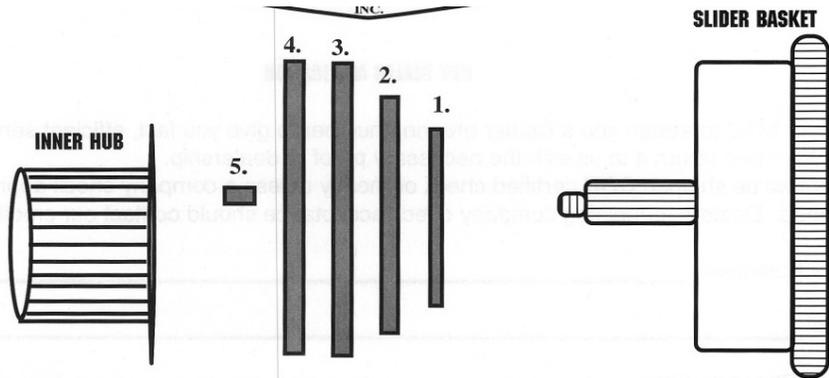
- A. You must stage the bike 250 to 400 R.P.M. below the stall speed to prevent burning the friction plates.

3. AUTOMATIC TRANSMISSION

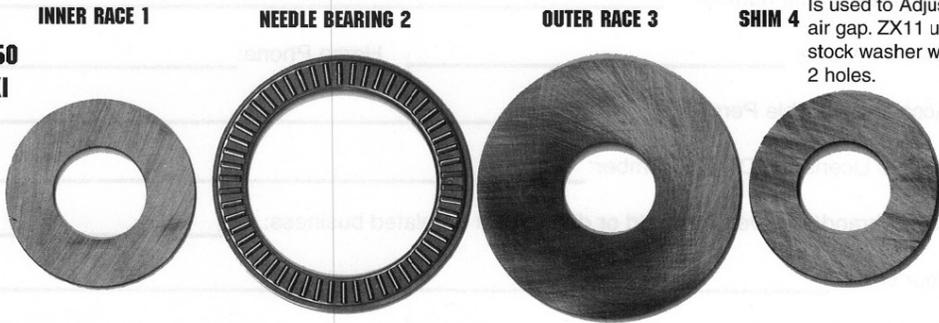
- A. If you run a 123 auto do your burnout in 3rd, if you run a 5 speed auto do you burnout in 5th.
- B. If you roll out of the throttle in any gear except high gear you could bend the shift shafts.

3. OILS

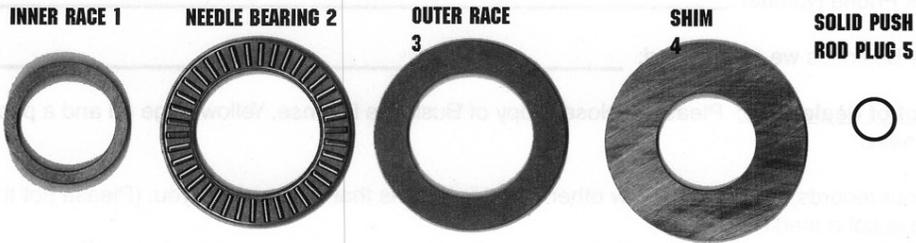
- A. We do not recommend any oil thicker than 10w40.
- B. We have not seen any problems with the clutch using synthetic such as Mobil 1 or Torco Oil.
- C. Look for oils that are JASO-MA rated.



**SUZUKI
GS1100-1150
& KAWASAKI
ZX1100**



**SUZUKI
GSXR1100**



**KAWASAKI
KZ900/1000**

