



[Brock's Performance • 4064 E. Patterson Road • Dayton, OH 45430 • Phone: 937-912-0054 • Fax: 937-912-0062](#)

## GSX-R1000 (01-04) CLUTCH CUSHION KIT INSTALLATION INSTRUCTIONS

**The clutch cushion kit for the Suzuki GSX-R1000 is designed to remove 'chatter and grab' associated with normal clutch component assembly wear. This kit helps produce a smooth clutch action while providing excellent feedback to the rider.**

### Check Package Contents:

#### *The Package Contents Include:*

1. One (1) Anti-Chatter Ring
2. One (1) Back-Up Ring
3. One (1) Judder Spring
4. Five (5) Clutch Springs



**If your package contents differ, please contact Brock's Performance at 937-912-0054.**

***For additional installation support please refer to the OEM service manual.***

The GSXR 1000's have a VERY tall first gear ratio in the transmission. (It is almost like launching in 2<sup>nd</sup> gear on other brands!) This is VERY hard on clutches... We drop 1 tooth on the front gear and 1 on the back for normal sized riders with a stock wheelbase. Larger riders and/or long swing arm bikes should gear for 5<sup>th</sup> in the quarter.

We will check the clutch every couple of outings to be sure that a single plate does not need attention....if it does, we replace that plate. We only replace the entire clutch pack after a catastrophic failure.

You are drag racing...you develop more heat in the clutch than you would imagine. (Over 750 degrees!) If the steels are not warped they are fine....do not worry about discoloration. If the fibers are glazed or burned...replace the bad ones.

We also use 100% FULLY SYNTHETIC MOTOR OIL ONLY!!! Organic oils can't take the heat generated by launching these bikes.

As a general rule: If you need to leave the line at more than 3000-4000 RPMs...your bike is geared WRONG for your application, or you need to change your riding style. (You had also better have an Uncle at a Suzuki dealership or you will go broke purchasing clutches!!!)

Additionally, if you have a big cc engine or Nitrous....you need to investigate switching to a lockup unit with our Clutch Cushion Kit. The 1000 basically has a 600/750 based road race (single launch per race) clutch pack. They will not take the additional power OR a very large rider for long.

Finally, The Clutch Cushion Kit can NOT repair broken clutch components! If your outer basket backing plate springs are worn out...replace the outer basket. The steel plates eventually damage the aluminum inner hub when launching from a dead stop on ALL motorcycles. This will form notches on the splines of the inner hub. If the inner hub is notched to the point that the steel plates cannot slide freely.....they bind! Where they bind effectively determines how much clutch you are using.

For example: If the 3<sup>rd</sup> steel plate back from the pressure plate binds, you are only using the steels and frictions from that plate out to the pressure plate. The plates from this point inwards can't be compressed thoroughly and they slip; this creates tremendous heat....before long you have an expensive mess.

We have found this to be the major cause of REPEATED clutch failure and excessive wear.....The inner basket is BROKEN if the notches won't file smooth.....REPLACE IT! They don't cost much and will save you \$ in the long run.

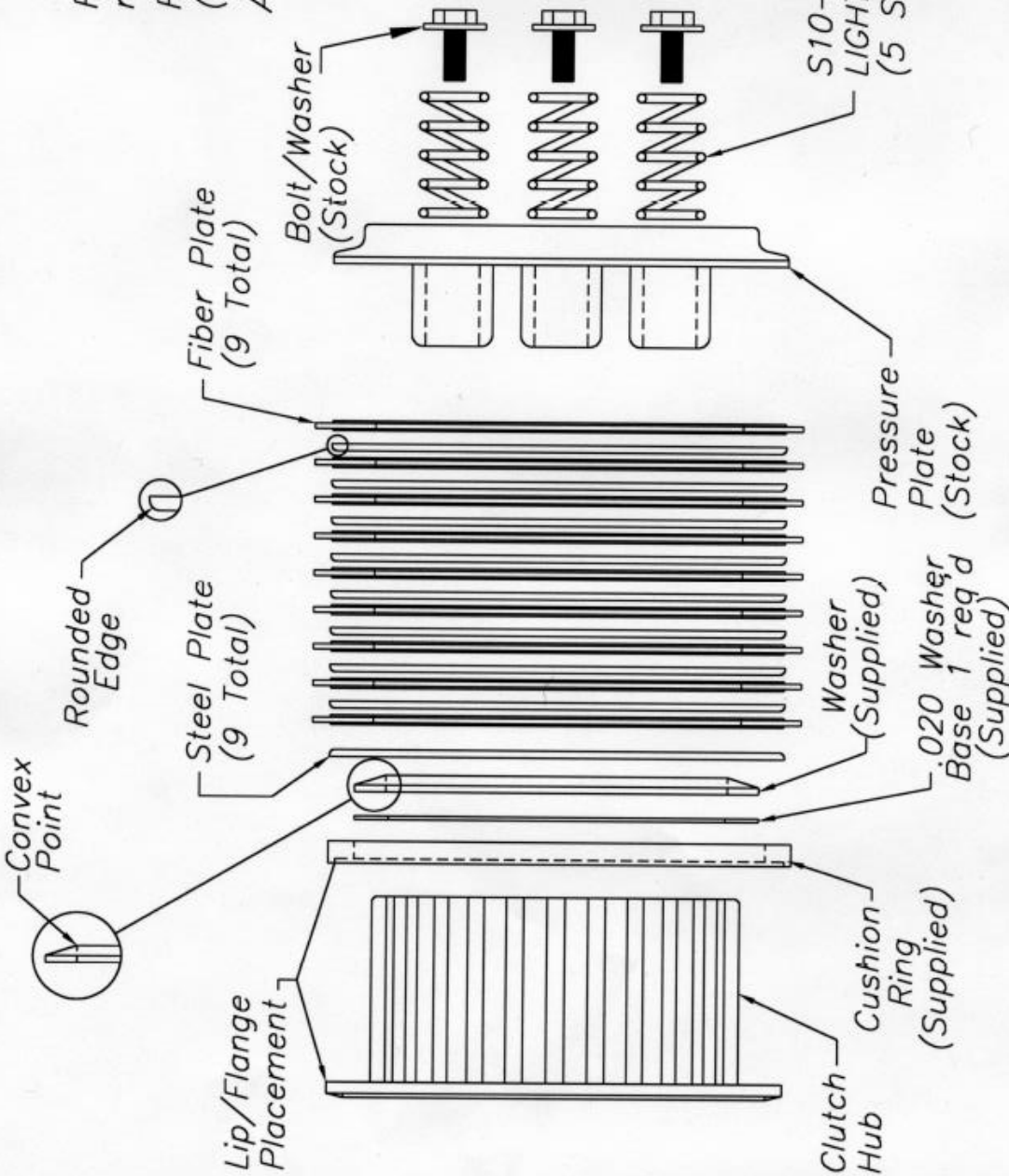
Instructions

Remove 1 fiber plate to make room for the cushion. (Discard)

Re-assemble as shown (Begin with steel).

Adjust free play in cable.

Call if you have questions.  
 Brock  
 937-298-6818



**S10-CCK**

REV	QTY	IN	DESC
STANDARD TOLERANCE UNLESS OTHERWISE SPECIFIED			
.X = ± .030			
.XX = ± .015			
.XXX = ± .005			
.XXXX = ± .0005			
FRACTIONS = ± .020			
ANGLES = ± 1 DEG			
BREAK ALL SHARP CORNERS AND EDGES UNLESS OTHERWISE SPECIFIED			
www.brockcrocing.com			
BROCK DAVIDSON ENTERPRISES, INC.			
Assembly Drawing			
GSXR 1000 Clutch Cushion Kit			
SCALE	NAME	DATE	DESIGNER
1-30-02	BROCK D.	9-28-03	
SHEET 1 OF 2	1000_Cushion.dwg		

AUTOCAD R13

Clutch Assembly - Side View  
 Not to Scale - Some detail removed for clarity

## GSXR1000 Clutch Free Play Adjustment

Improper adjustment of the throw out mechanism under the sprocket cover plug can cause serious clutch life issues with these machines.

1. Turn in cable adjuster all the way into the clutch lever assembly.
2. Do the same with the cable adjuster on the sprocket cover. (Leave @1/8 inch exposed thread above the lock nut) Tighten the lock the nut.
3. Remove the rubber plug in the center of the sprocket cover.
4. Use a 10 mm socket to loosen the lock nut surrounding the slotted screw.
5. Use a flat screw driver to tighten the screw until it resistance is felt. Do not over tighten....just allow the screw to "seat".
6. Back off the slotted screw 1/2 turn.
7. Tighten the jam nut with the 10mm socket.
8. Replace the rubber plug.
9. Adjust the free play at the lever assembly. (FYI: There should be @1/2 inch free play at the end of the lever to start).
10. Fine adjust from here until the clutch engages at the riders desired launch point.

There should be no visible glaze or smearing on the fiber plates and they should be at least as this as the minimum book specification. Steels should be flat. (Stack steels together and try to look through them towards light...if they are flat, you should not see any light.) Bluing of the steels is normal after drag strip launches.

It is critical that that the inner clutch hub is not notched. Replace or file notches smooth.

The ACR ring MUST sit flat on the rear flange of the inner hub! File any casting flash which could prevent this.

**ALL BROCK'S PERFORMANCE PRODUCTS ARE DESIGNED FOR CLOSED-COURSE RACETRACK USE ONLY!**

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