

#### Engine Stats for the GSXR 600 Engine

	2004–2005	2006	2007	2008	2009–2010	2011–2013	2014
RPM at Rev Limiter	15000	15000	15000	16500	16500	16500	16500
RPM at ECU Seal	15000	15000	15000	15000	15000	15000	15000
Compression Ratio	11.8: 1	12.5:1	12.5:1	12.5:1	12.8:1	12.9:1	12.9:1
HP / RPM	118	125	125	125	125	125	125
Torque (lb-ft)	52/10800	69/10000	69/10000	69/10000	69/10000	50/11500	50/11500
Slipper Clutch?	No	Yes	Yes	Yes	Yes	Yes	Yes

Source: <https://www.autoevolution.com/> and [https://en.wikipedia.org/wiki/Suzuki\\_GSX-R600#Specifications](https://en.wikipedia.org/wiki/Suzuki_GSX-R600#Specifications)

- A Slipper Clutch reduces the effects of engine braking.
- It also reduces wear and tear on the engine and transmission, thereby improving its durability.
- A Slipper Clutch prevents the rear-wheel from locking-up in case of any uncertain situation.
- Slipper Clutch improves the performance of the motorcycle.

What is the benefit of slipper clutch? ^

The main purpose of a slipper clutch is to **prevent over engine rev and rear wheel hop (or clatter) especially under hard braking in a vehicle** (usually performance motorcycles). It does so by partially slipping until engine's speed matches with the vehicle's speed upon sudden braking..

[https://en.wikipedia.org/wiki/Slipper\\_clutch](https://en.wikipedia.org/wiki/Slipper_clutch)

#### Summary

The purpose of the ECU Seal Program is to level the various GSXR 600 engine platforms in terms of engine performance and longevity. **\*\*\*Important\*\*\* The map that is used to seal the ECU has to be the map that SHARP Engineering created.**

The allowable engine years for the SHARP Mini Late Models are 2004 - 2014. Every so often Suzuki will release a new engine platform that improves the performance over previous years. Between the years of 2004 -2014, there have been multiple platforms released to the racer.

Compared to the 2004-2005 platform, the new platforms have increased the compression ratio, horsepower, torque, and clutch system. For these improvements and other reasons, SHARP felt the need to implement the ECU Seal Program.

So what is the ECU Seal Program? Using the Woolich software, a tuned map is applied to the ECUs. The tune sets the rpm rev limit at 15,000 RPMs. The reason why your Mychron may show a rev limit of 14,900 RPMs as the Mychron won't show the remaining 100 RPMs.

So why set the rev limit at 15,000? The stock rev limit for the 04-05 platform is 15,000 RPMs. 2008 and newer platforms have a rev limit of 16,500 RPMs. The 15,000 rev limit brings all platforms closer to equal. For the newer engines this increases the longevity of the engines.

An important point we need to consider. We are not the only class that uses the GSXR 600 engines. There is limited supply. Doing things to decrease the longevity of our engines is going to make getting engines harder and more expensive.

What are the likely scenarios to occur if you run a class that doesn't utilize the ECU Seal Program?

- The newer platforms will have greater engine performance.
- Racers with any platform may want to get their ECUs flashed to increase the stock rev limit to gain more engine performance.
- Increasing the rev limit on engines is a slippery slope. It will definitely shorten the longevity of the engine.
- Visiting racers are less likely to come which will hurt car counts.
- Racers that do have the ECU sealed, will be at a disadvantage.