

SNOW TEST

Shockwave Adjustable Ramp Helix

SNOWTECH TESTED!



The premise is simple; provide a quick-adjust method of varying the angle of the helix ramps. Instead of having to remove and disassemble the secondary clutch, now you can adjust the helix angles with a simple twist of your wrist. It is so simple and effective, why doesn't every machine have one?

The (patented) Shockwave Adjustable Ramp Helix was first released for Yamaha

models last season, and anyone who knows what happens when you install a steeper or shallower helix will instantly recognize the benefit here. The helix angle installed by the factory is selected for a wide range of conditions in an effort to provide acceptable performance across the widest range of conditions. That being said, there are often times you could use a bit more or less helix angle to better match the conditions of the day. All you need to know is the target operating RPM of your engine package.

With the Shockwave, this job is a matter of lifting the hood, loosening the locking screw with an allen wrench, turning the adjuster ring (clockwise to raise engine RPM, or turn it counter-clockwise to lower engine RPM), tighten the locking screw and away we go. The helix offers an adjustment range of 16 degrees, with each full turn of the locking collar providing a four-degree variation. Each ramp is mounted on a pivot, so when you turn the adjuster collar all ramps pivot exactly the same amount for precise adjustment. This is so slick, every Yamaha should have one!

When and why would you change the helix angle? Without getting into a multi-page clutching discussion, this can be manipulated to vary the engine RPM (to a degree) and to match the torque balance between the track and the engine. If the engine is making less power or the track is seeing a higher pull on it (wet sticky snow) then you could compensate by installing a lower angle helix, which will slow the upshift, allowing the engine to build power (raise engine rpm) before the load is thrown at it.

If the engine is making more power, or if the track is seeing less pull on it, then we can compensate by installing a steeper helix, which will speed the upshift and tend to reduce engine RPM. Mountain sled applications are where this feature is most desirable, considering the frequent variation in elevation and hourly change in snow conditions, allowing you to make precise changes to your calibration in a matter of seconds.

Clutch tuners have long known using the secondary is an effective "back-door"

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