

Chain adjustment – By Guy Allen

Ever wondered how it should be done? Here's Australian Motorcycle Trader's guide to getting it right.

It's a grubby job and it has to be done — adjusting and lubricating the chain that is. The good news is that it shouldn't take more than 15 minutes once you have a handle on exactly what to do.

How you go about it will depend on the type of bike you own. Some use snail cam adjusters at the rear (so named because of their shape), others eccentrics (because of how they run in the swingarm), then there's the plain old screw adjuster in the end of the swingarm and finally you'll come across some single-sided variations on bikes such as VFR Hondas, T955 Triumphs and Ducati 916s.

In any case, the general principle remains the same: you want to take the excess slack out of the chain, without overdoing it, and make sure the back wheel remains more or less straight in the process. You also want to keep the chain lightly oiled, again without drowning it.

MAX EXTENSION

You should check the chain tension with the bike on its wheels and preferably with someone sitting on it. You want the chain at maximum extension — or with the front sprocket, swingarm and rear sprocket all in line with each other.

It probably won't be lined up perfectly, but plonking yourself in the saddle and using your own weight (or that of a friend) is a good start. Wiggle the lower run of the chain as close as possible to the middle. You should have about 15-20mm of slack up and down.

Less and it's probably too tight; more and it's too loose.

WHY BOTHER?

Good question. A tight chain will place a lot of unnecessary strain on itself, the sprockets and even gearbox bearings. Keep running chains too tight and you can do a lot of expensive damage.

Have it too loose and you risk the chain thrashing around and causing increased sprocket wear or, in a worst case, throwing itself off the sprockets altogether and causing a crash.

A well adjusted and lubricated chain transmits the power smoothly (you can actually see the difference on a dyno), lengthens the service life, smooths out your gear changes and makes the bike feel better to ride.

HOW?

Check your owners manual. In general, the only bolts you should have to touch are the rear axle in some cases or the bolts holding the axle clamps, plus the adjuster bolts themselves (if there are any). On bikes like the late-model VFRs with Pro-arm, you loosen a clamp and use a C-spanner to make the adjustment.

Older series Hinckley Triumphs, for example, use an eccentric in a double-sided swingarm, where you loosen two clamps at the end of the swingarm and roll the axle to the desired position with an oversized Allen key. Current Blackbirds, as another example, are more conventional, requiring you to loosen the axle and then turn a couple of adjuster screws. This system is also the most common on older machinery.

Okay, so we've checked the tension — it's too loose — and we now have the relevant axles/clamps loosened. Move the rear wheel back gradually — a millimetre or two at a time — and recheck the tension. A small amount of rear wheel movement will make a big difference.

Hopefully you'll be able to leave everything loose, sit on the bike (or get a friend to do it) and check the tension. Some bikes running eccentrics may not allow this — you might have to nip up the clamps quickly while you double-check.

If you don't like the idea of doing it on the wheels, you can take an educated guess (usually leaving a little extra slack) and do it on the centrestand. But you need to check it isn't too tight — on the wheels — once you're done.

You are also aiming to move both sides evenly. The swingarm will have markings near the axle to act as a guide and the general idea is to keep them even. If it's back, say, four notches plus a mil on one side, make sure it is on the other. (This obviously doesn't apply to single-side swingarms.)

The only catch is that markings often aren't accurate and you may end up with a slightly misaligned wheel. Wheel alignment is explained in another article in this section.

DOUBLE CHECK

Once you have the tension right, nip up all the bolts again. Axle bolts and axle clamps generally require a lot of force — the amount required to undo them is often a guide.

However, adjuster screws and the like need to be treated more gently. If you're unsure, get someone with a little more experience to show you. What is critical is that you double-check that everything is back where it should be.

LUBE

The ideal environment is one that's free of dirt with a constant and minuscule supply of oil — the direct opposite of what chains experience. Most bikes run O-ring chains these days, with the links having lubrication trapped inside the link behind O-rings. That lengthens the life considerably, though they need some help. Even an O-ring appreciates some external lube to cut down the friction on the sprocket and therefore keep the running temperature down.

For most the practical option is spray lube. Generally you should apply it while the chain is warm (just after a ride) and allow ten minutes of so for the carrier liquids to evaporate.

You apply it to the inside of the chain (spray it on top of the lower run, forward of the rear sprocket) and remember a little goes a long way.

Some bikes over the years have had a drip feed to the chain, while others have successfully used fully-enclosed chain systems. The best alternative around at the moment is an automatic oiling gizmo by Scottoiler (www.scottoiler.co.uk).

Regardless of what you're using, it pays to clean the chain occasionally. All you need to do is get a rag soaked in kerosene (not petrol, which will damage the O-rings and dilute the lubricant inside) and wipe the chain.

Do not, under any circumstances, be tempted to prop the bike on the centrestand, start the engine, put it in gear, and then let the chain run through the rag. There are gruesome cases of people watching the rag get caught in the chain, and then their hand...

HOW OFTEN?

How often should you adjust and lube the chain? That depends entirely on your riding. Hard riding, unsealed and wet roads all punish a chain.

So does a lot of horsepower and a heavy bike. A weekly check is a good place to start if you ride most days.

On longer runs, take a can of spray with you — you can get them in mini sizes — and apply it at the end of the day. Looked after, a chain and sprocket set should do 20,000km and anything up to double that.

A useful source of info is Regina's site at www.regina.it/oldregin/products/choose.htm, which is the best chain maintenance resource we've come across on the internet.