WORKSHOP

Saving you money on essential bike maintenance

BRUCE DUNN
MCN's expert technician

BRUCE SAYS

'It's not like other fluids'

This week's guide is aimed at bikes without ABS. Generally speaking, this applies to bikes made before 2016 which didn't have ABS fitted as an option. So know your bike before you start.

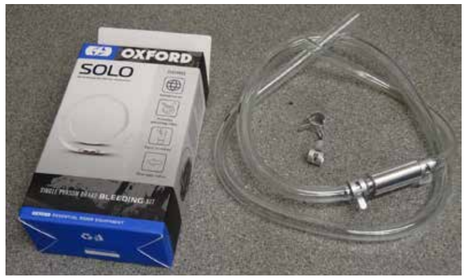
If it has ABS (as most bikes do after it was made compulsory on all machines larger than 125cc back in 2017) make sure you know what you are doing and check the procedure with a workshop manual. Often the steps involved when bleeding ABS brakes are fundamentally the same, but in practical terms the task is often more complex and can require access to the ABS control unit. The best advice concerning anything to do with ABS systems will come from either a qualified technician or an expert dealer.

Regardless of whether you have ABS or not, the brake fluid should be changed at least every two years. The thing to understand when it comes to brake fluid is that it is not consumed in same way as other fluids on a motorcycle. The level reduces because of brake pad wear and not because it is being 'burned' or evaporated. The only other main reason for brake fluid level change is a leak, so always investigate your hoses and unions if you find the level is dropping quickly.

Got ABS? Consult a technician

Bleeding brilliant!

Flush out old fluid and give your brakes back their bite



1 The tools for the job

It's a messy, fiddly job so it can be all too easy to put off, but changing your brake fluid is something that you must keep on top of; every two years for normal use, or more frequently for higher-mileage riders. Although, these days, it needn't be so messy or fiddly, as there are kits with one-way valves fitted. One of the simplest to use is the Oxford Products Solo kit.

2 Are they worn?

Before you change the fluid, first check the brake pad material. Low fluid levels can indicate that the pads have worn below the specified service limit, typically around 1-1.5mm. To check the pads, remove the caliper from the disc then turn it upside-down so that you can see the friction material. Replace the pads if they are worn below the service limit.

3 Prepare and protect

Brake fluid is corrosive so prepare the area around the tank and handlebars for any possible spillage. If you don't have a dedicated tank cover, use a bike cover draped over the tank and rear of the bike. Always have a few sheets of workshop paper towel at hand ready to mop up any drips that find their way on to unprotected areas.

4 Prepare for lift off

Make sure you're wearing workshop gloves to protect your hands, then get ready to flush out the old brake fluid by opening the master cylinder reservoir lid and carefully lifting off the rubber diaphragm beneath; sometimes this will stick to the reservoir body, so you may need to gently ease it off. Have paper towel to hand to catch drips.

5 Connect it up

Identify the size of the spanner needed to undo the bleed nipple on the caliper, usually 8mm-11mm. Remove the grommet protecting the nipple. Place a ring spanner on the nipple so it can be loosened around 90°. Fit the short pipe from the bleed kit to the exposed nipple.

6 Get things flowing

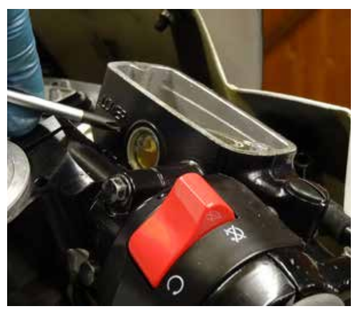
Begin drawing fluid through by pulling the lever in gently, then holding it in. With the lever against the bar, undo the nipple a fraction until fluid can be seen flowing. Pump the lever with the nipple still open and the inline one-way valve will prevent air entering the system.

7 Out with the old...

Add fresh fluid as the level reduces – the level drops quite quickly as the old stuff is pumped out. You will see a change of colour, too: the fresh fluid will be lighter. At this point, tighten the nipple. If you have a twin-disc setup, now transfer the bleed kit to the other caliper.

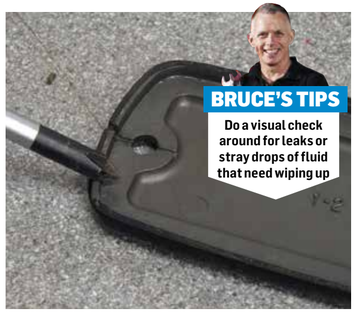
8 Catch any drips

Repeat the process on the other caliper and when the fresh fluid becomes visible in the pipe tighten the nipple. The lever should remain firm with no sponginess. Carefully disconnect the bleed kit pipe from the nipple and catch any drips with workshop paper towels.



9 Top up your levels

If you are changing fluid in the way described using a kit fitted with a one-way valve there should be very little chance of air getting into the system which would result in a very spongy feel at the lever. Once you are satisfied that all the old fluid has been flushed out, carefully top up the master cylinder reservoir to the correct level on the sight glass.



10 Breathing easily?

Before you replace the diaphragm which sits under the lid of the master cylinder reservoir, give it a wipe with a clean cloth, and at the same time inspect for signs of damage. Do the same for the reservoir lid, paying particular attention to the tiny breather holes, which should be completely free from dirt or debris. Check everything for leaks and head out for a test ride.

MECHANIC'S WAR STORIES

'There wasn't enough pressure to work the GSX-R's injectors'

Suzuki K8 hit by mystery flat spot

MECHANIC
Sam O'Brien at Junction M/C in Tamworth

When Sam O'Brien at Junction Motorcycles in Tamworth, Staffs, took in a clean, 33,000-mile GSX-R1000K8 to sell with 'running problems' that the owner had given up on, he was confident he could sort it quickly.

Sam said: "I changed the eight injectors, screwed in new plugs and stick coils and fitted a new fuel pump motor before taking it to Steve Jordan Motorcycles in Great Bookham, Surrey. They flashed the ECU to develop a custom fuel map on their dyno and got it pumping out a very decent 165bhp at the rear wheel, so I soon sold it."

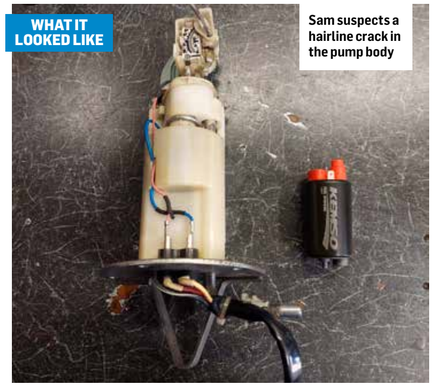
But three weeks later he took a call from the buyer to say it had a flat spot at 6000rpm. They took it back in and tried to sort it with new plugs, battery, reg/rec and throttle bodies without any joy, so he gave him a full refund and did some further research.

"The O-rings can perish where the pump assembly mounts on the tank, which means there's a drop in fuel pressure. The bike keeps running, but if you give it large on the throttle there's not enough pressure to fire all eight injectors, just the top rail of four, so you get the flat spot," said Sam.

But new rings didn't make any difference, so it was time for a final throw of the dice in the shape of a complete pump assembly for £290 on an auction site. This time the bike ran perfectly!

The pump assembly isn't a serviceable item, and it was either a partially blocked filter in there or a hairline crack in the body that was causing all the problems. So, anyone want a clean and now sorted Gixxer for £4750?

WHAT IT LOOKED LIKE



Sam suspects a hairline crack in the pump body