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At the time of its launch in 1975 the CB400/4 was Honda's smallest officially UK-imported four cylinder machine, and indeed still is. I believe this is the main reason for their continued popularity. And, of course, there's that unique and practical 4-into-1 exhaust system which Honda made so much of at the time. Even later models are now 15 years old, so I hope other avid (like myself) Mechanics readers find my own experiences of servicing and maintenance useful.

Cycle Parts

New Honda mudguards, seat, frame or exhaust system will be expensive to replace.

I had my own frame powder coated but this is now falling off in small areas due to bad preparation. It's true that preparation is everything when it comes to coating frames.

A rear mudguard costs over £100 new but a fiberglass copy can be bought for around £15.

A replacement front mudguard must be metal as it incorporates a fork brace. The best place to find steel mudguards is David Silver Spares. To keep it in good condilion, paint the underside with Smoothrite or similar paint. Silvers also have copies of the original seat for about £55 and M&P Accessories sell an 'Eddie Lawson' style seat for a similar sum. This is more comfortable and slightly lower.

Maintenance

Brakes

If your 400/4 is a low mileage one with the original front brake pads. change them instantly, they're practically useless in the wet. Modern replacements (Honda's included) work fine.

Watch the caliper pivot as it is prone to seizing. A grease nipple can easily be fitted to prevent reoccurrence. The rear drum brake is fine and the rear hub is not prone to cracking - unlike the CB500 four's.

Forks

The fork legs should be checked for alignment, oil leaks, and rust. If you need to replace the seals, use genuine Honda replacement seals as they incorporate a twin lip on them - unlike pattern ones.

Fork gaiters will also protect the stanchions and therefore the seals.

Exhaust

The standard exhaust is not hugely expensive at around £150 for the entire system, but an alternative Motad which fits and works well is slightly cheaper.

Engine

The bottom end is very strong and the crankshaft should be good for over 100.000 miles as long as a few points are observed.

The primary chain typically lasts around 60,000 miles and unfortunately requires a full engine strip to replace. The bores should go for about 50,000 miles before a rebore is required but will be using oil by that time.

In good condition the engine burns virtually no oil between changes.

I have stripped an engine that had covered 112,000 miles (some of them racing in the Isle of Man) and it was in quite usable condition.

I treated it to new bearings and chains as a matter of course but it didn't really need them. The gearbox needed two new cogs at £75 the pair. but that was about it.

Camchain Mechanism

There can be several problems in the camchain area but they can be overcome with a little prior knowsedge.

The chain itself is the same size as a 900 Kawasaki's but has only 82 links as opposed to the Z900's 122. As the Z900 produces over twice the power and doesn't suffer from camchain problems, we cean safely assume it's not the 400/4's chain that is the problem.

That leaves the tensioner and its mechanism. Firstly, the tensioner can seize as a result of the chain grinding on the pivot point.

I have yet to strip one of these engines and find no damage here. The chain's clearance is minimal and the slightest bit of slack allows it to hit the pivot point.

The second probIem is the adjuster bolt either shearing off or stripping its own thread in the crankcase.

If the adjuster bolt is okay and you suspect the tensioned is seized the trick is to 'help' the tensioner's spring.

Remove the front engine mounts for ease of access to the adjuster and undo its locknut, followed by the bolt itself.

Remove the 10mm blanking bolt at the top of the raised boss which holds the tensioner bolt. Insert a snug-fitting screwdriver down this top hole. Now start the engine and push down hard on the screwdriver. This will exert pressure on the tensioner and instantly silence the tinkling noise.

Now refit and tighten the adjuster bolt and locknut. If this doesn't quiet the noise you need a new chain and tensioner, cost around £30.

Aftermarket ones are easily available with a joining link which saves an engine strip.

If kept correctly adjusted, the camchain should last for 10,000 miles before it needs re-tensioning. It should not need replacing for at least 40,000 mites if a heavy duty version is fitted. These cost around £17.

Stripped thread

If the problem is the adjuster bolt's stripped thread, there is a solution which avoids having to strip the engine. It is not ideal but has worked successfully on one of my bikes for the last 15,000 miles.

For this job, you'll need to remove the rocker cover to see what's happening to the camchain.

Remove the blanking bolt and thread but a bit longer (35 to 40mm is ideal). File away the bottom seven threads to make a smooth, round rod of about 5mm in diameter.

Now put a nut on the rod and screw it down into the blanking bolt hole. As it is tightened the smaller end will bear down on the tensioner pushrod and push the tensioner outwards against the chain.

Always err on the 'slack' side and when you have the correct tension on the chain use the nut to lock the bolt in position.

Incidentally, the top end of the engine can be removed with the engine in the frame, so the tensioner, guide or camchain can be rep1aced if necessary by just removing the rocker box cover.

Oil and Filter

It is critically important to change the oil every 1000 or 1500 miles, changing the filter on every other change. Use the genuine Honda filter. Use good quality oil and always treat the engine gently after starting from cold.

Use a full hexagon socket when removing the oil filter housing - the bolt head is easy to round off with a spanner. If it is already rounded saw a groove in the bolt head and loosen it with an impact screwdriver. This method has never failed me.

A pattern bolt is available with a larger head, but there is danger of stripping the threads in the crankcase, so take care - that's why Honda fitted 12mm heads.

Tappets

To adjust the tappets you need to remove the horn to get to No. 2 exhaust valve. The job is also made easier by sliding the carbs to one side.

Inlet and exhaust are set to 0.05mm. Once set correctly they should not need checking for at least 5000 miles. 10,000 is not uncommon.

Ignition Timing

There are no inherent problems with the standard set-up but I have used Boyer Brandsen electronic ignition for seven years without ever having to touch it.

This system also incorporates an electronic advance/retard mechanism which is handy as the original mechanical unit can sometimes seize.

Carburettors

Investment in a set of vacuum gauges to keep the curbs balanced is recommended.

Make sure everything else is correctly adjusted before balancing and be aware that the numbers on the dials are not as important as the fact that each dial must match up.

Balancing should be carried out with the engine at its normal running temperature. The first signs that they need checking is an uneven tickover.

Modifications

A HUGE variety of bolt-on parts are (or were) available for the 400/4. Most bikes in regular use are modified in some way.

Electrics

Basically very good, apart from the headlight, horn, and misfiring in the wet.

The cheapest and best way to improve the headlight is to change the original 35 watt bulb for a 45 watt one from a Honda dealer. I prefer this method to the more expensive and hard-to-locate Cibie halogen conversion.

The horn can be improved by adjusting the small screw and locknut at the rear of the unit. Simply turn it a

quarter at a time until you get the best tone. Properly adjusted it can be surprisingly loud!

Misfiring in the wet seems endemic to many Honda fours of this period and I can't offer a foolproof solution. But the following steps will help. Fit a mudflap to the front mudguard; fit the coil with the leads facing backwards; use NGK plug caps; seal all points with silicone spray, WD40 or something similar.

If the problems persist, disconnecting the kill switch sometimes helps.

Brakes

Goodridge brake hose improve the feel at the brake lever and modern pads also help.

Check the caliper pivot and piston for free movement. The easiest way to remove a seized piston is to take off the caliper with the hose still connected and pump the lever. It should simply pop out.

I had the disc drilled on mine and the only disadvantage was that the pad wear increased. For a twin-disc set-up, simply use 400N Superdream parts. They have the same diameter and spacing of fork legs.

You will then have a 'Comstar' front wheel. A matching rear Comstar from a 250 or 400 Superdream will bolt straight in to the 400/4.

When fitting twin discs, always replace the old 400/4 master cylinder with one from a twin disc system. A CB750F2 item is a good choice.

Engine

A big-bore kit is made by Yoshimura and takes the engine out to 466cc. Try IMD pistons for these.

Yoshimura used to make a kit which worked out at 458cc but these are now unobtainable new. A second-hand kit would be a good buy (if you can find one). because you then have the option of another overbore to 466cc later. You can use the rings from the larger kit, suitably filed down.

It is possible to take these engines out to 500cc using 500/4 pistons, but you also need new liners and a 2mm spacer under the barrels. Only a job for the adventurous, as it puts a lot of strain on the engine.

For any application, other than racing, you are better off with the standard camshaft as you will retain a reasonable spread of power.

If the engine is apart for any reason, check the condition of the camchain adjuster thread in the crankcase. You could have this threaded to accept an oversize 8mm to prevent future problems.

Exhaust

The original exhaust and the Motad and Yoshimura systems, will fit the F1 and F2 models. Strangely, many other systems will not fit both bikes, as they use different silencer mounting points.

Air Filters

The main benefit of K&N-type filters is ease of access.

The main disadvantage is difficulty in getting replacement main jets as they are of an unusual design but a determined search should unearth some 85 to 90 sizes. Standard is 75. You should also lift the carb needles one notch from their standard middle positions to clean up the mid range, and then adjust the pilot screws to get a reliable tickover. Start at two turns out and work from there.

Tires

I have had good results with Avon Roadrunners. Use AM20 90/90 H18 fronts and AM21 100/90 H18 rears.

I've never had any problems with grip, even with the exhaust grounding (just the once) and they last well.

I fitted a full race-style fairing to one of my bikes, with Ace bars, a 458cc kit, Ramair filters, electronic ignition and a standard exhaust.

This gave a top speed of over 110mph and rarely less than 60mpg even when driven hard. It is quite an impressive combination.

My CB900FA would only go 7mph faster and only did 30mpg at similar speeds.

Last Winter I made the round trip from London to Norwich and back every fortnight. I only had to push it once - when I ran out of petrol.