

NC30 Club

Performance Improvement

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First Step

Ensure that the machine is in good order. Basic yes, but if your bike is not at least in the specification that the designers planned then you will not be able to get the best out of it - as well as running the risk of killing, maiming or scaring yourself, someone else, or the bike. So check or change all the fluids. Ensure that the brake pads are in good condition and unglazed. The drive chain and sprockets take quite a hammering on these bikes, as they do not have a cush drive in the rear wheel, so check for tight spots and worn sprocket teeth. Keep it clean and lubricated at all times. Chain adjustment is important for chain, sprockets, and output shaft bearing and handling. Pay attention to the front forks and change the fork oil at least a couple of times during the year. Fork bushes do wear especially if they are only lubricated with worn out oil so test for play.

Once you are certain that everything is in order then allow yourself the treat of releasing the extra 10 -1 15 kmh with a speed derestrictor. There are several on the market the HRC item is still available from us £103.85. We also have our own version at £44.99 that replaces the sensor in the speedometer head.

Basic Tuning

Engine

Fit the clubs jet kit and a race end can. The NC30 clubs jet kit was designed to overcome the mid range flat spot, between 5000 and 7000 rpm, that becomes noticeable when a free flowing end can is fitted. The kit includes replacement needles, two sets of main jets and instructions. The inclusion of two sizes of main jet tailors the kit for either the standard exhaust or race end can. Expect to see between 62 and 65 bhp depending on the dyno! Note to fit an alternative race can to the NC30 the original silencer section of the exhaust system must be cut off at about 13mm before its welded joint. Most quality end cans, such as the Scorpion™, are supplied with a refitment sleeve to allow the original silencer to be fitted for legal road use.

Alternative air filters do not appear to enhance the engine HP but are available and are at least reusable, although the genuine Honda™ air filter only costs £22.41 from us at the time this was written.

A noticeable amount of mid-range torque is released when a full or half exhaust system is fitted. Unfortunately there are not any in production in the UK at the moment, although they are still made in Japan and the USA. Prices range from approx. £650.00 to £1500.00. Various styles are available from 4 into 1, 4 into 2 and 4 into 2 into 1. The full exhaust is preferred over a half exhaust as it has tubular, tuned length, downpipes. This does give a bit more to the peak HP. It is worth scanning the classified advertisements and checking with breakers for used ones. Many used machines were imported from Japan with them. Please note that some of the Japanese systems have a smaller diameter outlet pipe than the normal UK aftermarket end cans inlet diameter of 50mm.

Chassis

The basic set up is good. The later NC30's forks have both spring preload and damping adjustments. These forks are easily fitted to the early models and this should be your starting point. The rear suspension unit will probably be quite tired by now. The later NC30 had a remote reservoir and we can offer an exchange rebuilt replacement (approx. £110.00) either in standard or track day trim. Most of the major suspension unit manufacturers offer a unit for both NC30 and NC35. Prices range from £250.00 to £1500.00.

The front end can be further enhanced with tuneable damping valves and alternative spring rates. There is not much to be gained from using another person's ideas on settings, as they are dependent upon many factors. What needs to be accomplished is that the suspension operates correctly to suit the conditions. Many good books are available on chassis tuning and riding techniques. A thorough understanding of the principles involved cannot be understated in its importance as well as knowing your own riding style in determining the correct settings and adjustments to be made. There are also many expert suspension-tuning firms that can provide complete tailor made bespoke packages. It is possible to fit complete forks from other machines to the NC30. The reason to do this would be to obtain even more adjustments to fine-tune the machines behaviour. The complete assembly from the NC35 can be fitted to the NC30 with modifications to the steering stem to utilise the NC30's larger headstock bearings. With the use of alternative fork yokes (aka triple clamps) Kawasaki ZXR fork legs and brakes can be fitted. These kits are available from the club. The HRC fork legs are still listed (approx. £900.00). These though offer no further adjustments than the standard fitment; they have different damping and spring rates.

For the rear suspension an alternative rocker linkage was offered by HRC that altered the ratio. This also incorporated a spherical bearing instead of the standard fitment rubber bush for the lower shock mount. HRC offered replacement wheels for the NC30 including a lightweight 3.50" x 17" front as well as 5.00" x 17" and 4.75" x 18" rears.

The most common wheel change is the fitting of a standard NC 35 rear wheel (4.75" x 17"). This is a straight bolt on job although as in all fitments of 17" rear wheels attention must be paid to restoring the ride height. This is accomplished by fitting the NC35 rocker arm to frame link rod. The NC30 Club offers an exchange service of adapted NC30 link rods if difficulty is found obtaining the NC35 part. We also intend to produce our version of the HRC rocker arm and link rod in the near future.

Full Race Engine

A comprehensive range of parts was offered for the NC30. In some areas alternative options were offered. We have not been able to determine the complete list of parts as some were only offered to semi works and factory teams, a case in point are the Keihan flat slide carburettors. As well as HRC many Japanese tuning firms supplied tuning parts. The HRC race engine kit comprised of pistons, rings, conrods and camshafts. There was also a close ratio transmission kit. A complete electrical system comprised of a wiring harness, CDI unit and tachometer. Recommended spark plugs for race use are special race versions in the NGK™10 and 11heat range. A range of alternative needles was listed for the standard carburettors. For the NC30 an air duct was specified that fitted in the vee of the engine between it and the carburettors and extending forward over the front cam cover to between the frame and upper radiator. The intention was to create a plenum chamber for the open carbs with the underside of the fuel tank. For the NC35 an air box was supplied that incorporated a large air scoop and internal baffling. For both models alternative velocity stacks were listed to provide better air flow at high engine speeds. Sprockets were listed to suit the recommended chain size of 520. To dissipate and control the extra heat that racing produces larger radiators were listed. For the Japanese market racers a water-cooled oil cooler and modified water pump was supplied. The UK factory racers had larger air-cooled oil cooler. Privateer racers of the era often utilised a third radiator fitted under the seat with associated ducting in the seat hump. A modern alternative for the water-cooled oil cooler is readily available from breakers as suitable units are fitted to many modern Hondas™. The standard water pump cover has a boss that can be drilled and fitted with a pipe for one water connection the tapped drain fitting is utilised as the other. In most cases for racing the alternator is removed although the HRC wire harness has provision for both an alternator and battery/condenser. Blanking plugs were listed to fill the voids left by the starter motor and charging leads.

The NC30 Club has plans to add to its range the following in the near future:

500cc big bore kit

400cc replica race pistons (two ring)

Replica close ratio gear kit

Replica rear suspension rocker arm and tie rod

Billet race camshafts

Replica race wire harness (NC30 & NC35)

Race fuel tanks

Replica clip-on bars

Replica radiators

We already offer

Replica NC30 and NC35 race jet kits

Road Jet Kit

Replica Air Duct

Replica Air Box

Short velocity stacks

Race CDI Units

Road fairings for NC30 and NC35 from our own moulds

NC30 Endurance fairing (two piece)

NC30 Single seat from our own mould

NC35 Single seat from our own mould NC30 Dual seat from our own mould

Reground race camshafts Rearsets

Notes

HRC Listed spring rates for suspension

NC30 Front Soft $K=0.65 - 0.9$ Medium $K=0.7 - 0.9$ Hard $K=0.75 - 0.9$

NC35 Rear $K=15$ Optional $K = 14$