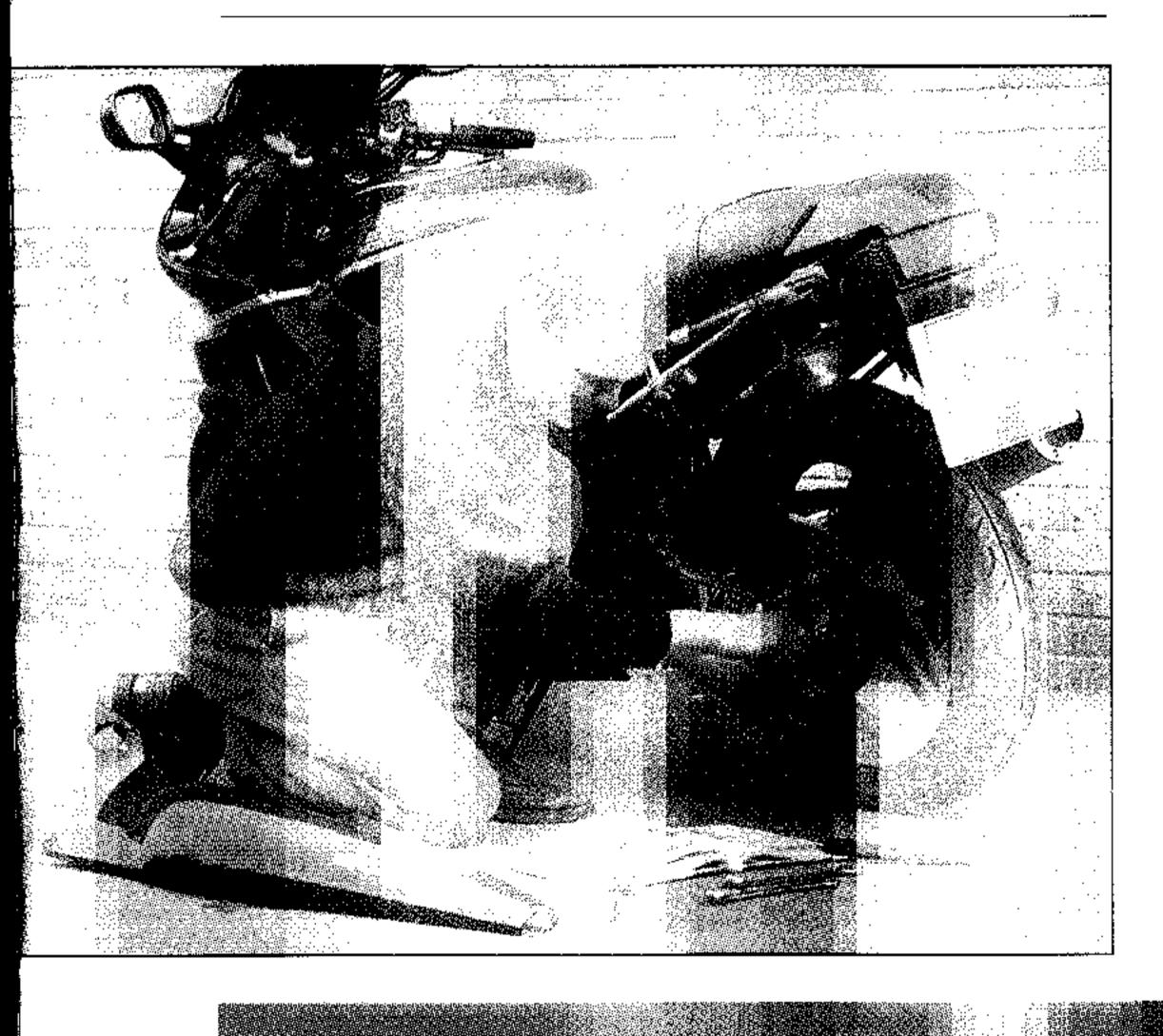
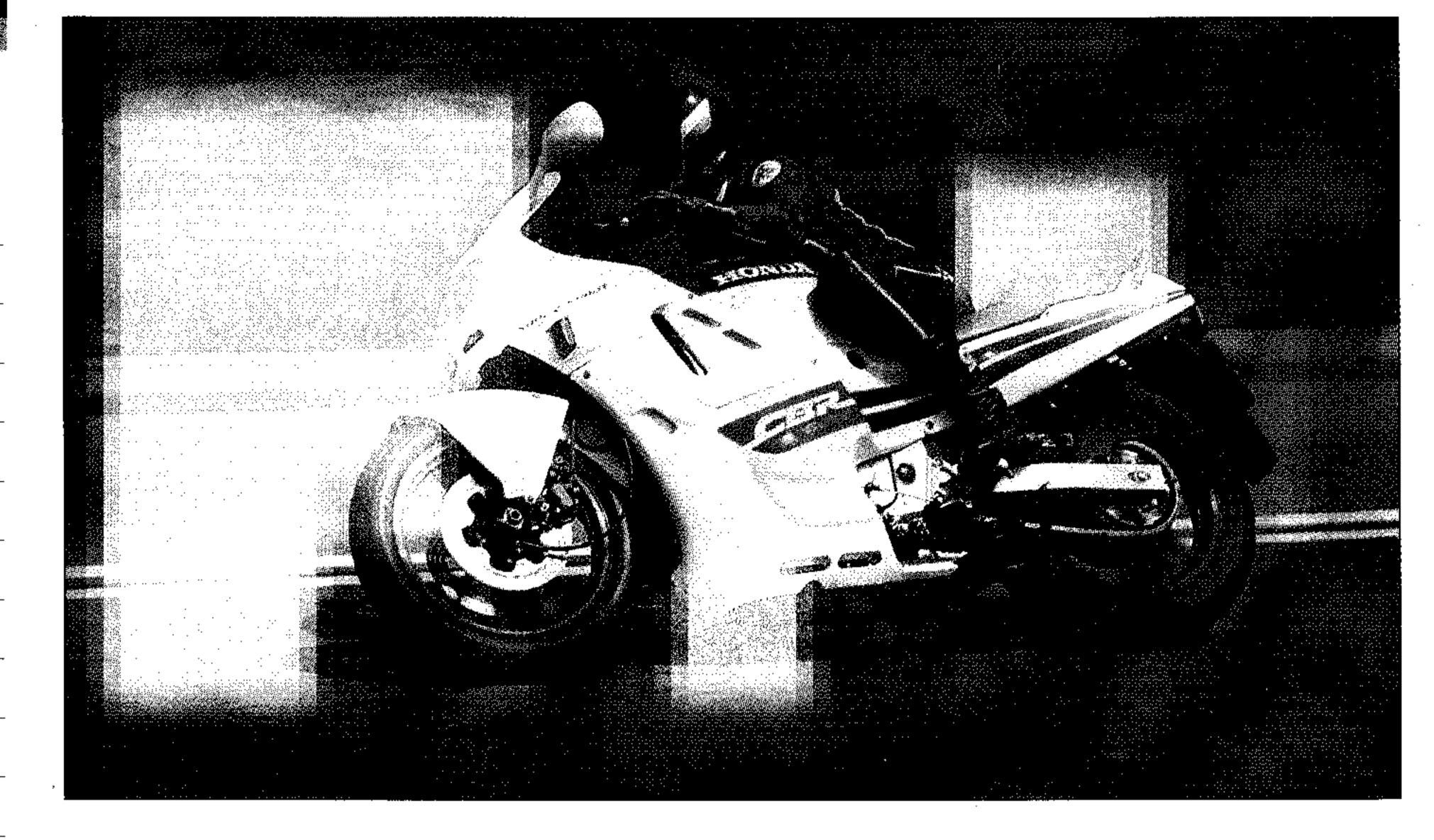
Honda CBR models covered by this manual:

AND SECOND TO SECOND		
CBR600F-H	598cc	1987
CBR600F-J	598cc	1988
CBR600F-K	598cc	1989
CBR600F-L	598cc	1990
CBR1000F-H	998cc	1987
CBR1000F-J	998cc	1988
CBR1000F-K	998cc	1989
CBR1000F-L	998cc	1990
CBR1000F-M	998cc	1991
CBR1000F-N	998cc	1992
CBR1000F-P	998cc	1993
CBR1000F-R	998cc	1994
CBR1000F-S	998cc	1995
CBR1000F-T	998cc	1996

Refer to Manual No. 2070 for the 599cc CBR600F2 and F3 models



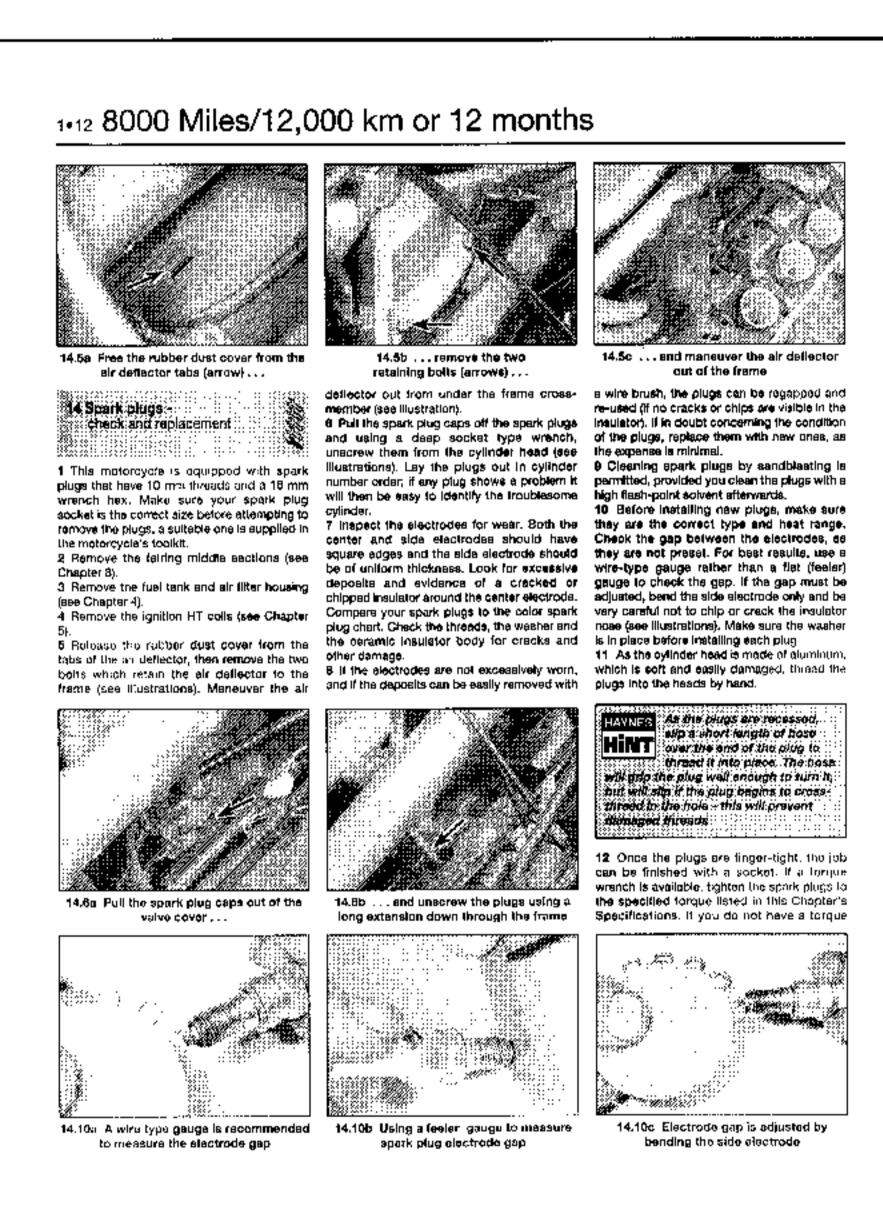


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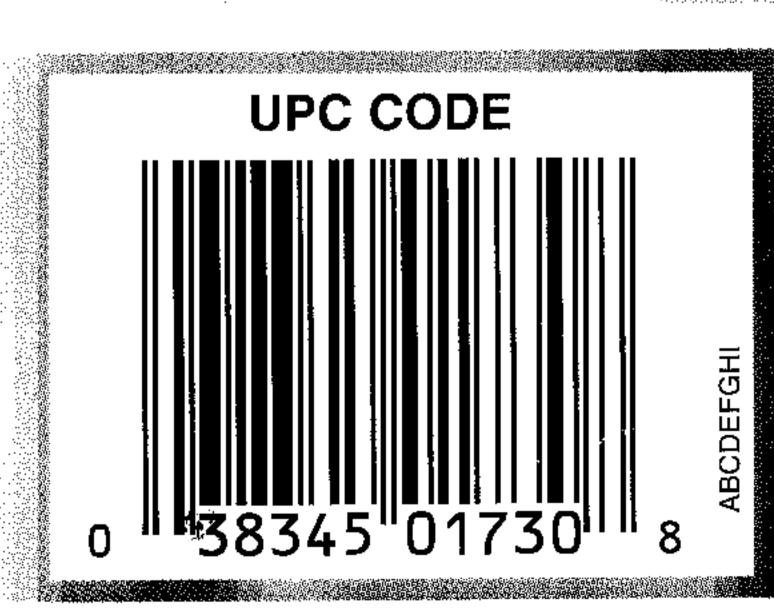
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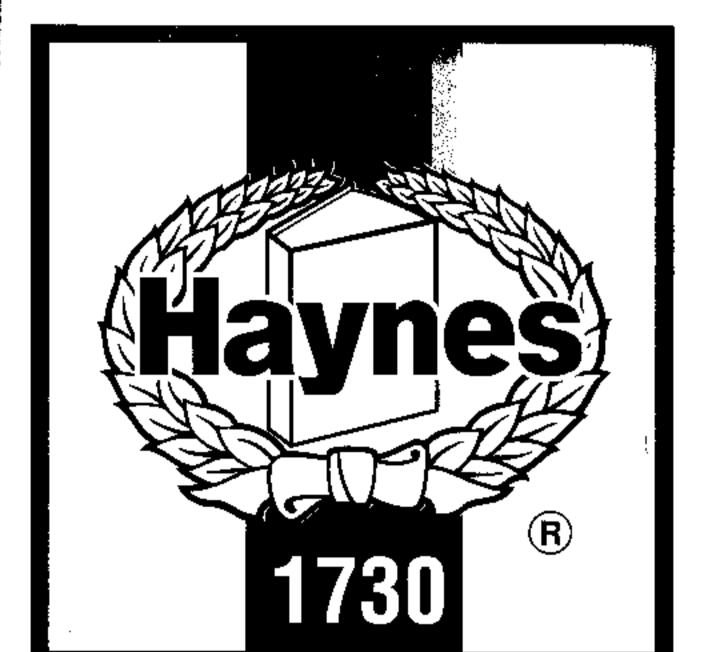
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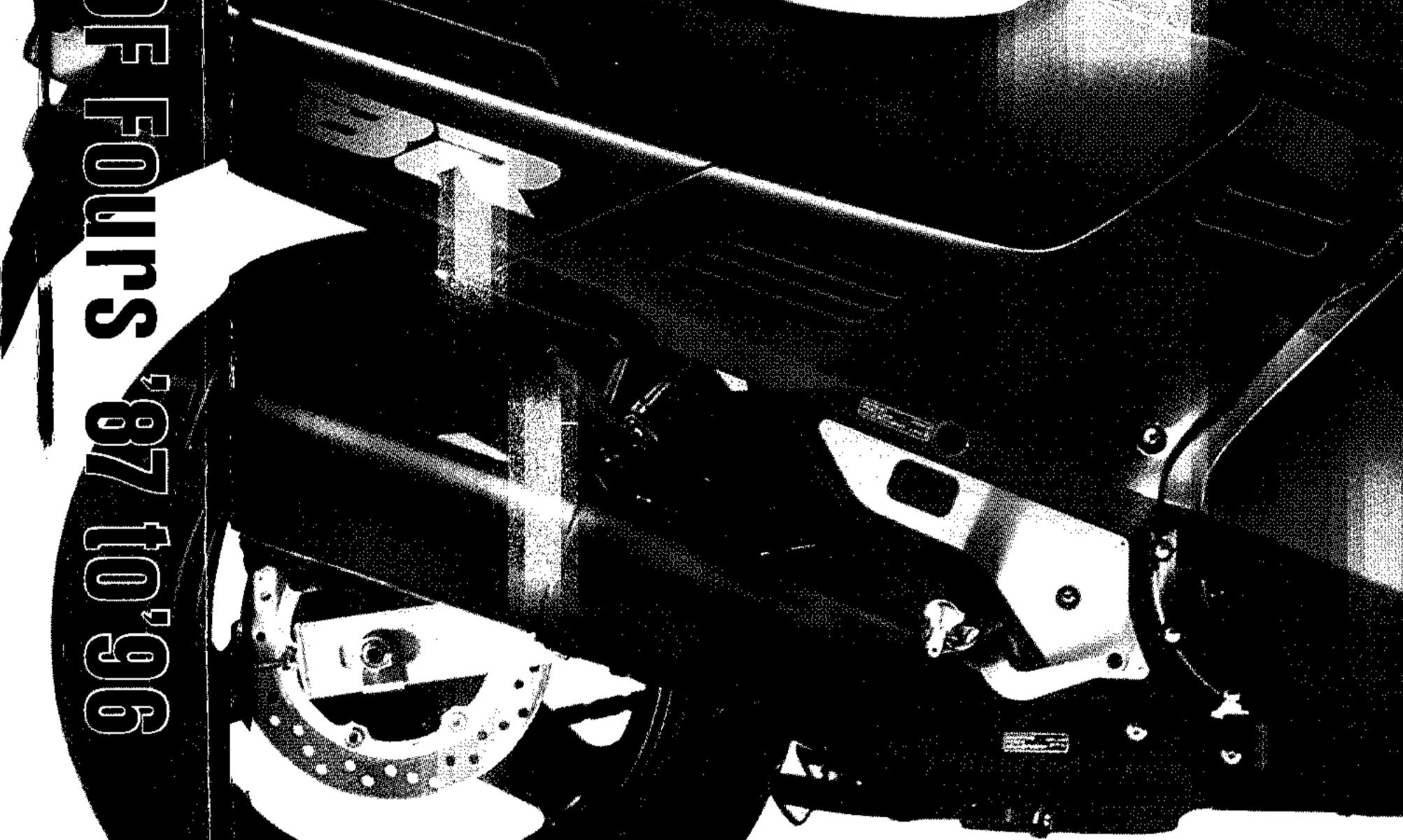
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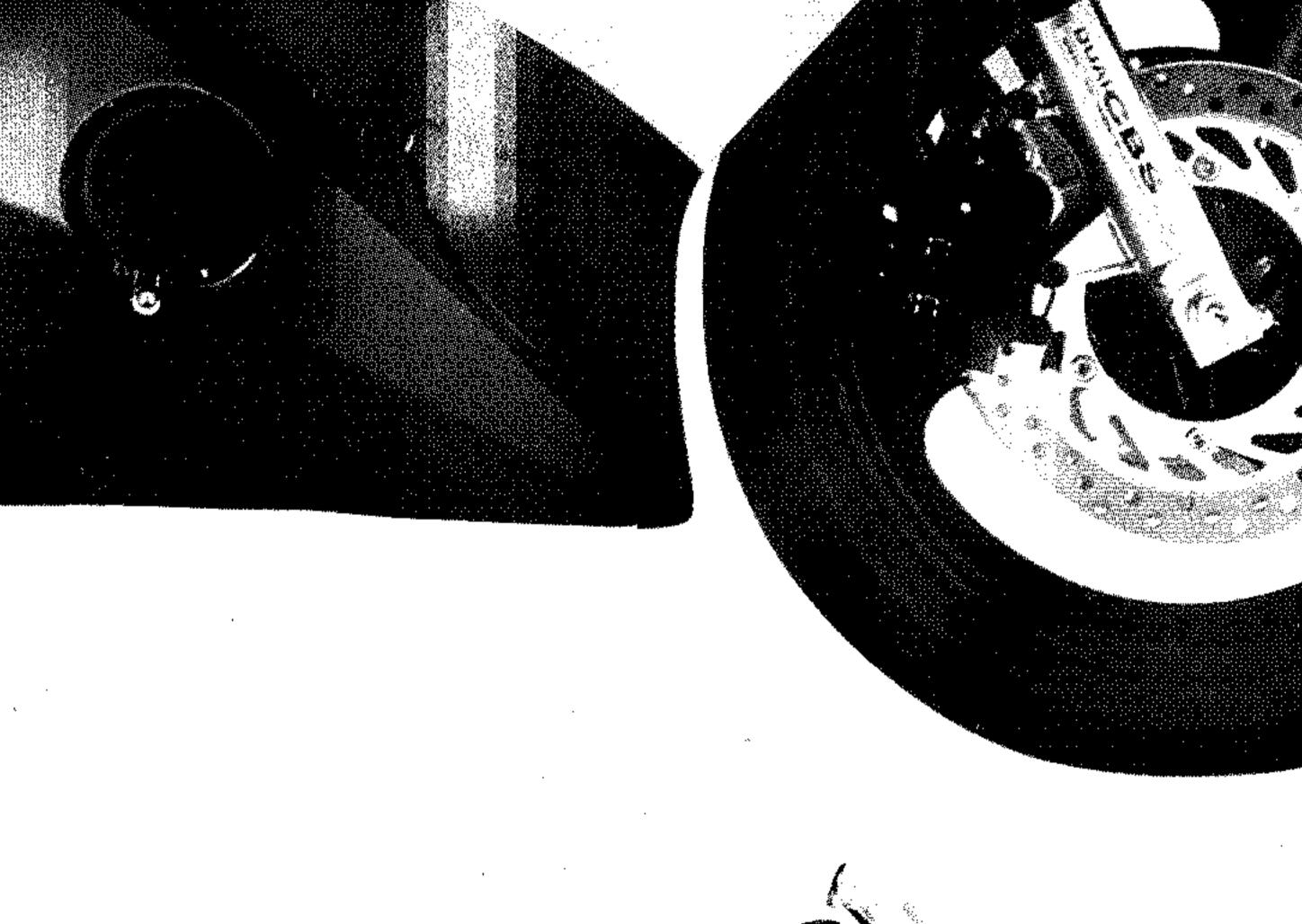


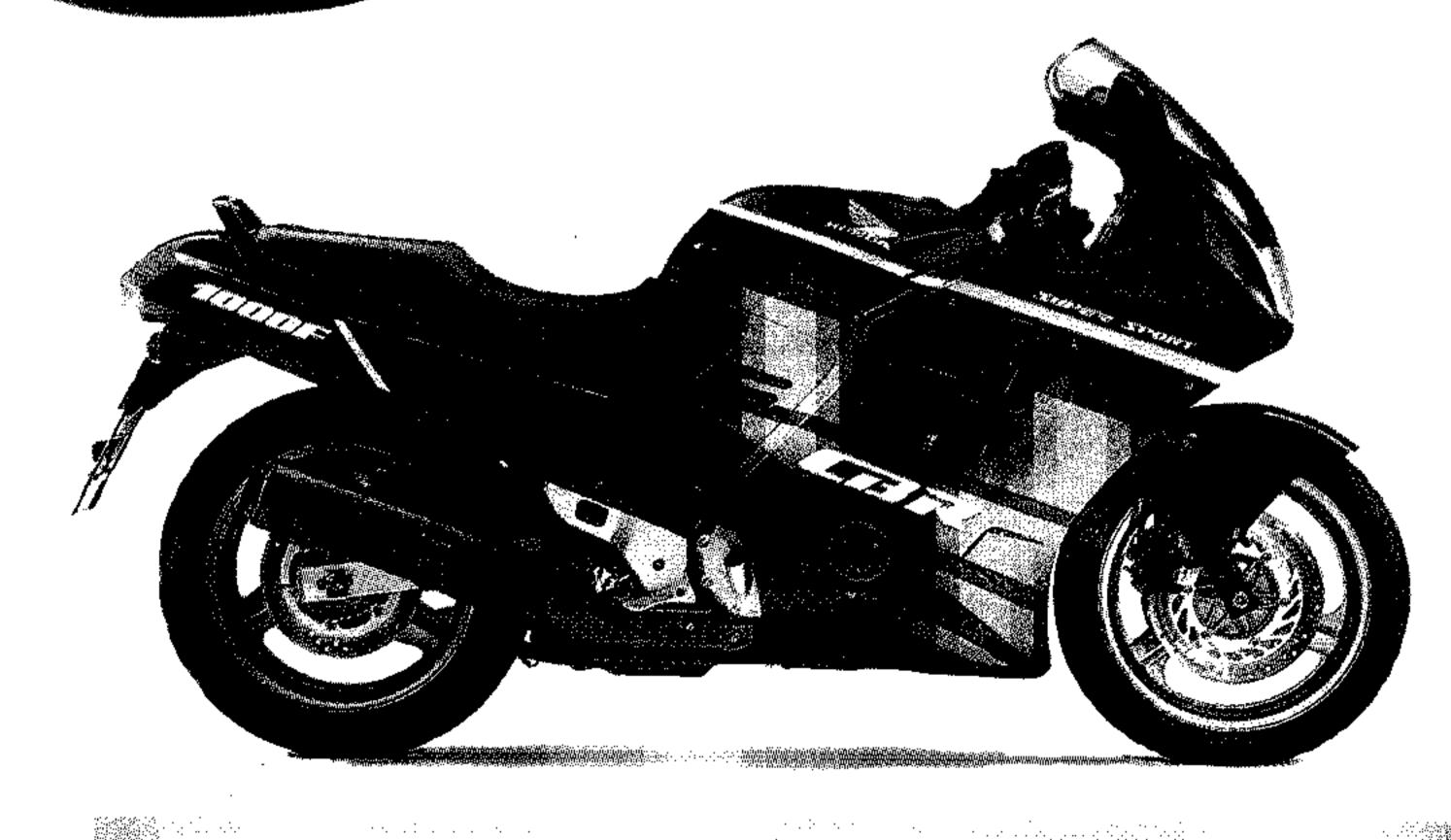
CBR600F1 & 1000F Fours

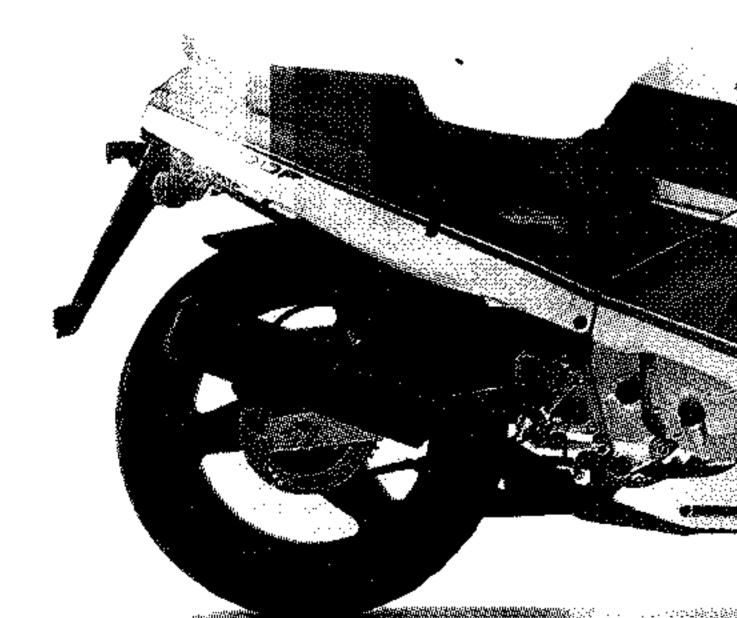
'87 to '96

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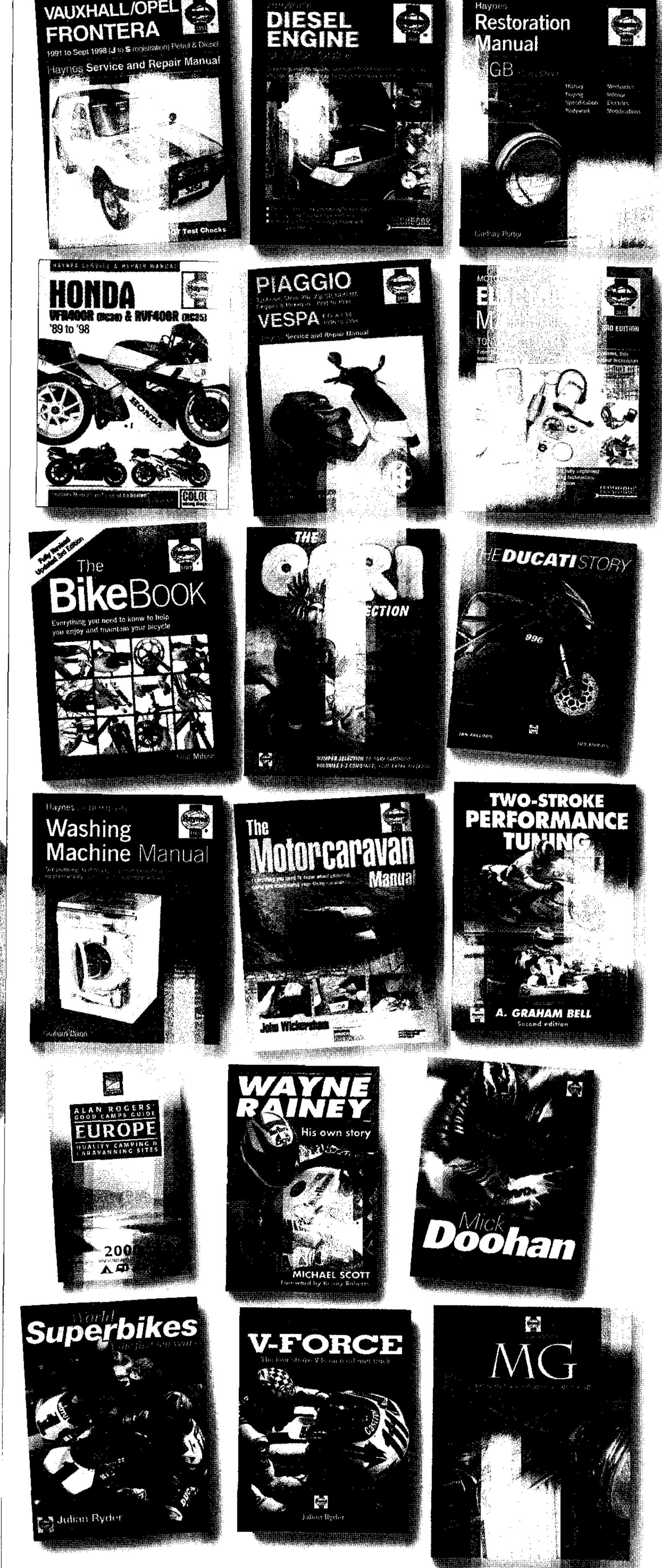






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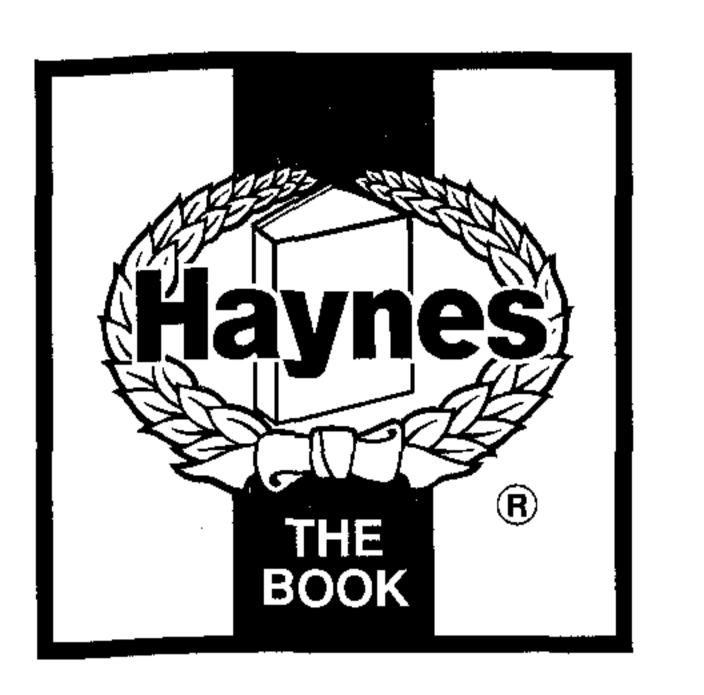
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Honda **CBR600F1 & 1000F Fours** Service and Repair Manual

by Mark Coombs and Penny Cox

Models covered

(1730-240-1Z4)

CBR600F1. 598 cc. UK January 1987 to December 1991 CBR600F1 (Hurricane). 598 cc. US February 1987 through 1990 CBR1000F. 998 cc. UK January 1987 onwards CBR1000F (Hurricane). 998 cc. US March 1987 onwards

Refer to manual No. 2070 for the 599cc CBR600F2 model.

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A book in the Haynes Service and Repair Manual Series

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ISBN 1 85960 228 2

British Library Cataloguing in Publication Data A catalogue record for this book is available from the British Library Printed in the USA

Haynes Publishing

Sparkford, Nr Yeovil, Somerset BA22 7JJ, England

Haynes North America, Inc

861 Lawrence Drive, Newbury Park, California 91320, USA

Editions Haynes S.A.

Tour Aurore - La Défense 2, 18 Place des Reflets, 92975 PARIS LA DEFENSE Cedex, France

Haynes Publishing Nordiska AB Box 1504, 751 45 UPPSALA, Sweden

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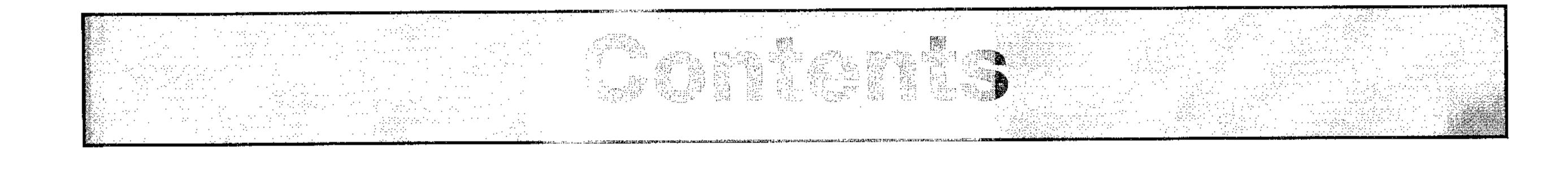
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Storage	

Ihe Birth of a

by Julian Ryder

here is no better example of the Japanese post-War industrial miracle than Honda. Like other companies which have become household names, it started with one man's vision. In this case the man was the 40-year old Soichiro Honda who had sold his piston-ring manufacturing business to Toyota in 1945 and was happily spending the proceeds on prolonged parties for his friends. However, the difficulties of getting around in the chaos of post-War Japan irked Honda, so when he came across a job lot of generator engines he realised that here was a way of getting people mobile again at low cost.

A 12 by 18-foot shack in Hamamatsu became his first bike factory, fitting the

Honda C70 and C90 OHV-engined models



D-type's first tests the entire workforce went for a drink to celebrate and try and think of a name for the bike. One man broke one of those silences you get when people are thinking, exclaiming 'This is like a dream!' 'That's it!' shouted Honda, and so the Honda Dream was christened. generator motors into pushbikes. Before long he'd used up all 500 generator motors and started manufacturing his own engine, known as the 'chimney', either because of the elongated cylinder head or the smoky exhaust or perhaps both. The chimney made all of half a horsepower from its 50 cc engine but it was a major success and became the Honda Atype. Less than two years after he'd set up in 🖪 r Honda was a brilliant, intuitive Hamamatsu, Soichiro Honda founded the

Honda Motor Company in September 1948.

By then, the A-type had been developed into

the 90 cc B-type engine, which Mr Honda

decided deserved its own chassis not a bicycle

frame. Honda was about to become Japan's

first post-War manufacturer of complete

motorcycles. In August 1949 the first prototype

was ready. With an output of three

'This is like a dream!' 'That's it' shouted Honda

simple two-stroke but it had a two-speed

transmission and most importantly a pressed

steel frame with telescopic forks and hard tail

rear end. The frame was almost triangular in

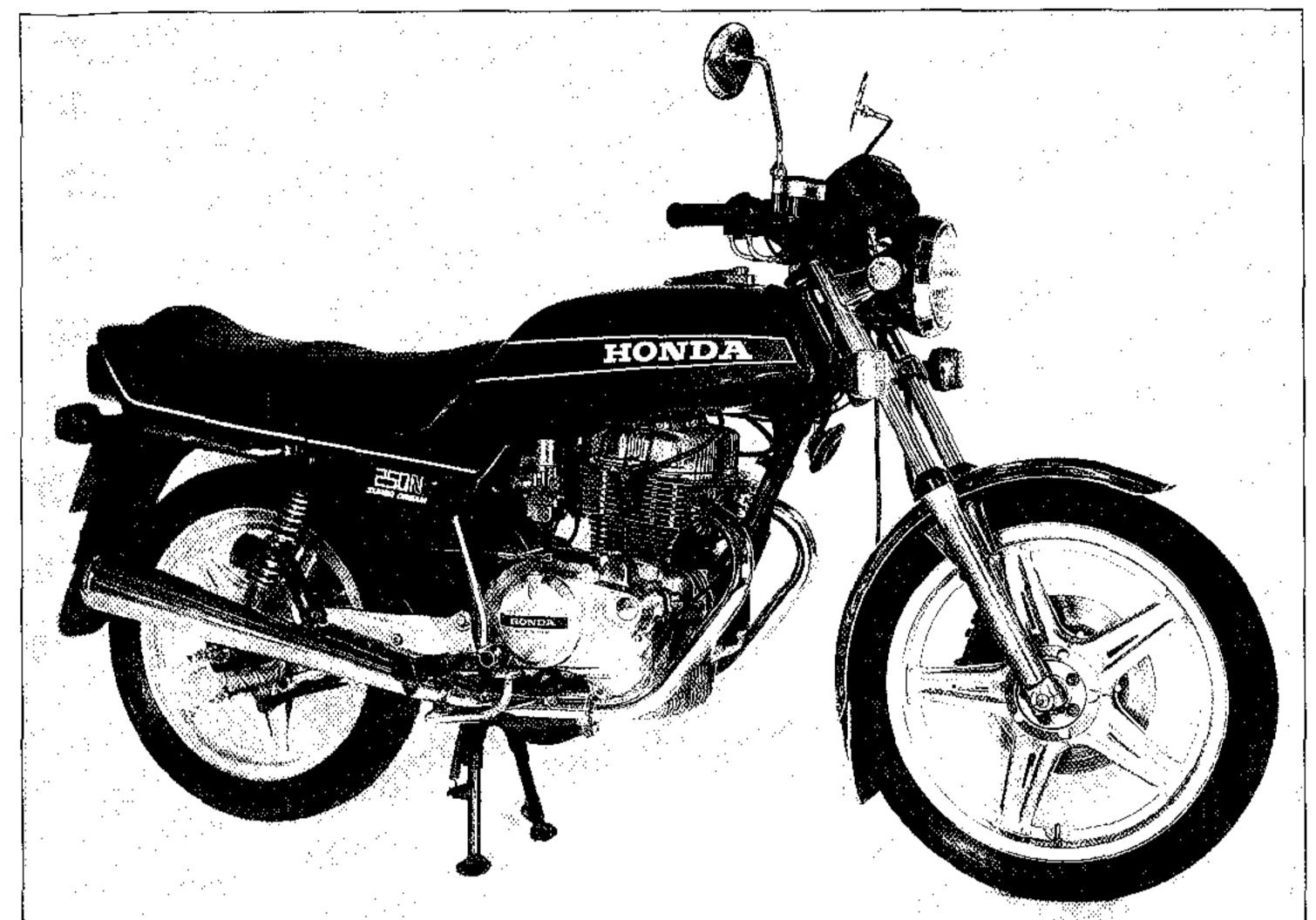
profile with the top rail going in a straight line

from the massively braced steering head to

the rear axle. Legend has it that after the

engineer and designer but he did not V bother himself with the marketing side of his business. With hindsight, it is possible to see that employing Takeo Fujisawa who would both sort out the home market and plan the eventual expansion into overseas markets was a masterstroke. He arrived in October 1949 and in 1950 was made Sales Director. Another vital new name was Kiyoshi Kawashima, who along with Honda himself, designed the company's first four-stroke after Kawashima had told them that the four-stroke opposition to Honda's two-strokes sounded nicer and therefore sold better. The result of that statement was the overhead-valve 148 cc E-type which first ran in July 1951 just two months after the first drawings were made. Kawashima was made a director of the Honda Company at 34 years old.

The E-type was a massive success, over 32,000 were made in 1953 alone, but Honda's lifelong pursuit of technical innovation sometimes distracted him from commercial reality. Fujisawa pointed out that they were in danger of ignoring their core business, the motorised bicycles that still formed Japan's main means of transport. In May 1952 the F-type Cub appeared, another two-stroke despite the top men's reservations. You could buy a complete machine or just the motor to attach to your own bicycle. The result was certainly distinctive, a white fuel tank with a circular profile went just below and behind the saddle on the left of the bike, and the motor with its horizontal cylinder and bright red cover just below the rear axle on the same side of the bike. This was the machine that turned Honda into the biggest bike maker in Japan



with 70% of the market for bolt-on bicycle

motors, the F-type was also the first Honda to

be exported. Next came the machine that

would turn Honda into the biggest motorcycle

The C100 Super Cub was a typically

audacious piece of Honda engineering and

marketing. For the first time, but not the last,

Honda invented a completely new type of

motorcycle, although the term 'scooterette'

was coined to describe the new bike which

had many of the characteristics of a scooter

but the large wheels, and therefore stability,

of a motorcycle. The first one was sold in

August 1958, fifteen years later over nine-

million of them were on the roads of the

world. If ever a machine can be said to have

brought mobility to the masses it is the

Super Cub. If you add in the electric starter

that was added for the C102 model of 1961

the design of the Super Cub has remained

substantially unchanged ever since,

testament to how right Honda got it first

time. The Super Cub made Honda the

world's biggest manufacturer after just two

their first bikes, America got just two

bikes the next year. By 1962 Honda had half

the American market with 65,000 sales. But

Soichiro Honda had already travelled

abroad to Europe and the USA, making a

special point of going to the Isle of Man TT,

then the most important race in the GP

calendar. He realised that no matter how

onda's export drive started in earnest

in 1957 when Britain and Holland got

years of production.

manufacturer in the world.

advanced his products were, only racing success would convince overseas markets for whom 'Made in Japan' still meant cheap and

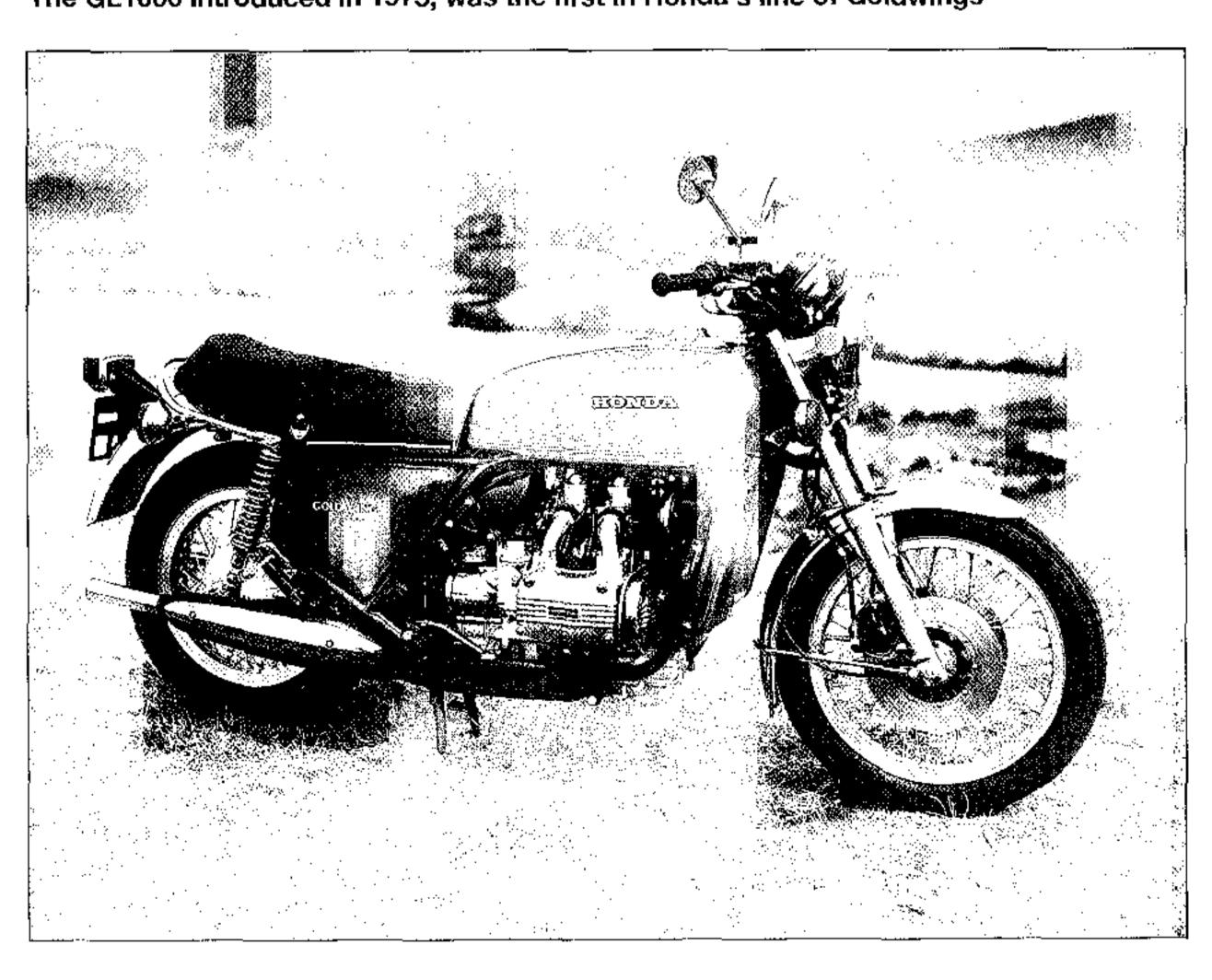
nasty, It took five years from Soichiro Honda's first visit to the Island before his bikes were The CB250N Super Dream became a favorite with UK learner riders of the late seventies and early eighties

ready for the TT. In 1959 the factory entered five riders in the 125. They did not have a massive impact on the event being benevolently regarded as a curiosity, but sixth, seventh and eighth were good enough for the team prize. The bikes were off the pace but they were well engineered and very reliable.

The TT was the only time the West saw the Hondas in '59, but they came back for more the following year with the first of a generation of bikes which shaped the future of motorcycling - the double-overhead-cam fourcylinder 250. It was fast and reliable - it revved to 14,000 rpm - but didn't

 handle anywhere near as well as the opposition. However, Honda had now signed up non-Japanese riders to lead their challenge. The first win didn't come until 1962 (Aussie Tom Phillis in the Spanish 125 GP) and was followed up with

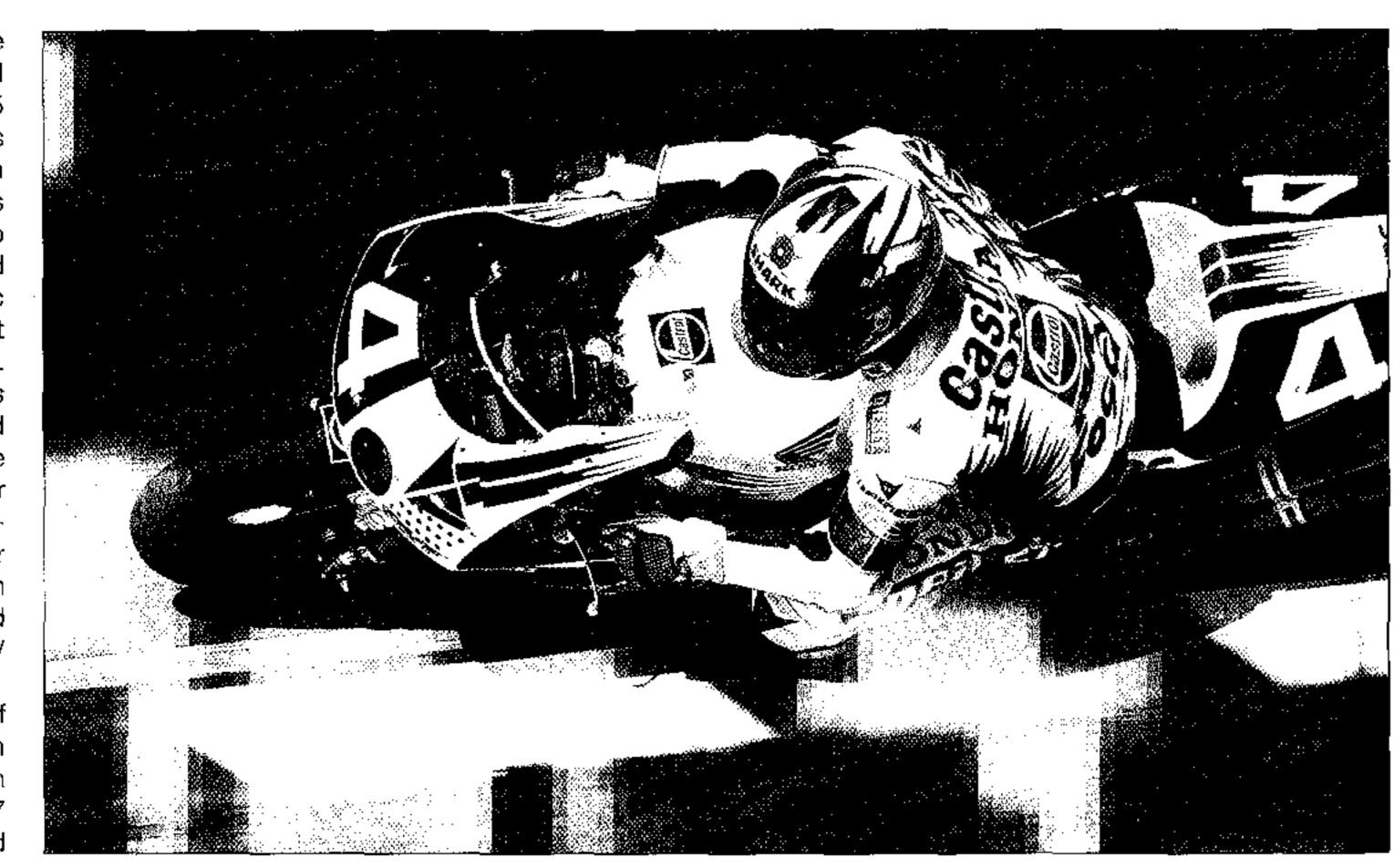
The GL1000 introduced in 1975, was the first in Honda's line of Goldwings



a world-shaking performance at the TT. Twenty-one year old Mike Hailwood won both 125 and 250 cc TTs and Hondas filled the top five positions in both races. Soichiro Honda's master plan was starting to come to fruition, Hailwood and Honda won the 1961 250 cc World Championship. Next year Honda won three titles. The other Japanese factories fought back and inspired Honda to produce some of the most fascinating racers ever seen: the awesome sixcylinder 250, the five-cylinder 125, and the 500 four with which the immortal Hailwood battled Agostini and the MV Agusta.

When Honda pulled out of racing in '67 they had won sixteen rider's titles, eighteen manufacturer's titles, and 137 GPs, including 18 TTs, and introduced the concept of the modern works team to

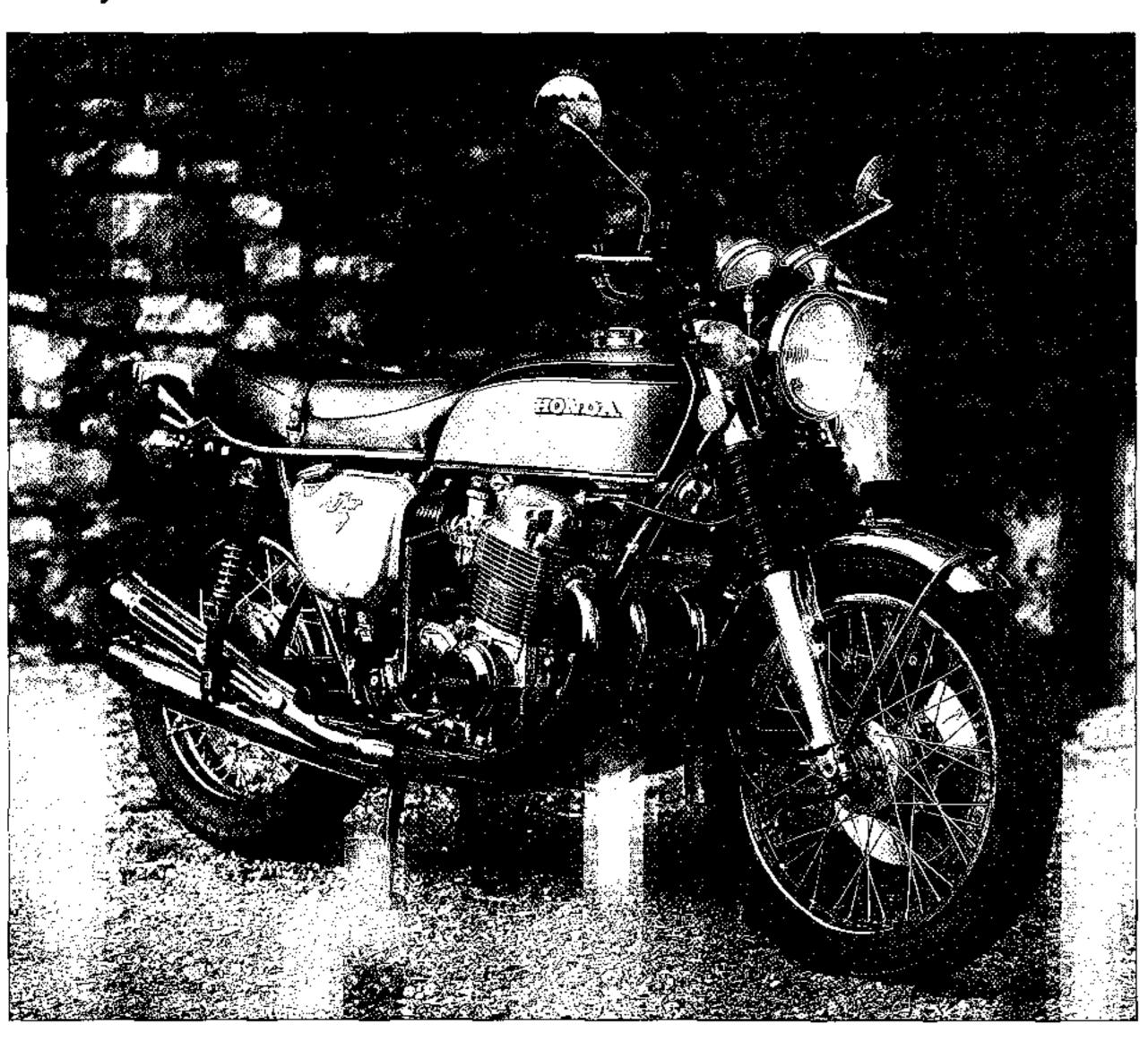
motorcycle racing. Sales success followed racing victory as Soichiro Honda had predicted, but only because the products advanced as rapidly as the racing machinery. The Hondas that came to Britain in the early '60s were incredibly sophisticated. They had overhead



Carl Fogarty in action at the Suzuka 8 Hour on the RC45

cams where the British bikes had pushrods, they had electric starters when the Brits relied on the kickstart, they had 12V electrics when even the biggest British bike used a 6V system. There seemed no end to the technical wizardry and when in 1968 the first four-cylinder

An early CB750 Four



for ever. They even had to invent a new word for it: superbike. Honda raced again with the CB750 at Daytona and won the World Endurance title with a prototype DOHC version that became the CB900 roadster. There was the six-cylinder CBX, the first turbocharged production bike, they invented the full-dress tourer with the Goldwing and came back to GPs with the revolutionary ovalpistoned NR500 four-stroke, a muchmisunderstood bike that was more rolling experiment than racer. It was true, though, that Mr Honda was not keen on two-strokes early motocross engines had to be explained away to him as lawnmower motors! However, in 1982 Honda raced the NS500, an agile three-cylinder lightweight against the big fourcylinder opposition in 500 GPs. The bike won in the first year and in '83 took the world title for Freddie Spencer. In four-stroke racing the V4 layout took over from the straight four, dominating TT, F1 and Endurance championships and when Superbike arrived Honda were ready with the RC30. On the roads the VFR V4 became an instant classic while the CBR600 invented another new class of bike on its way to becoming a best-

CB750 road bike arrived the world changed

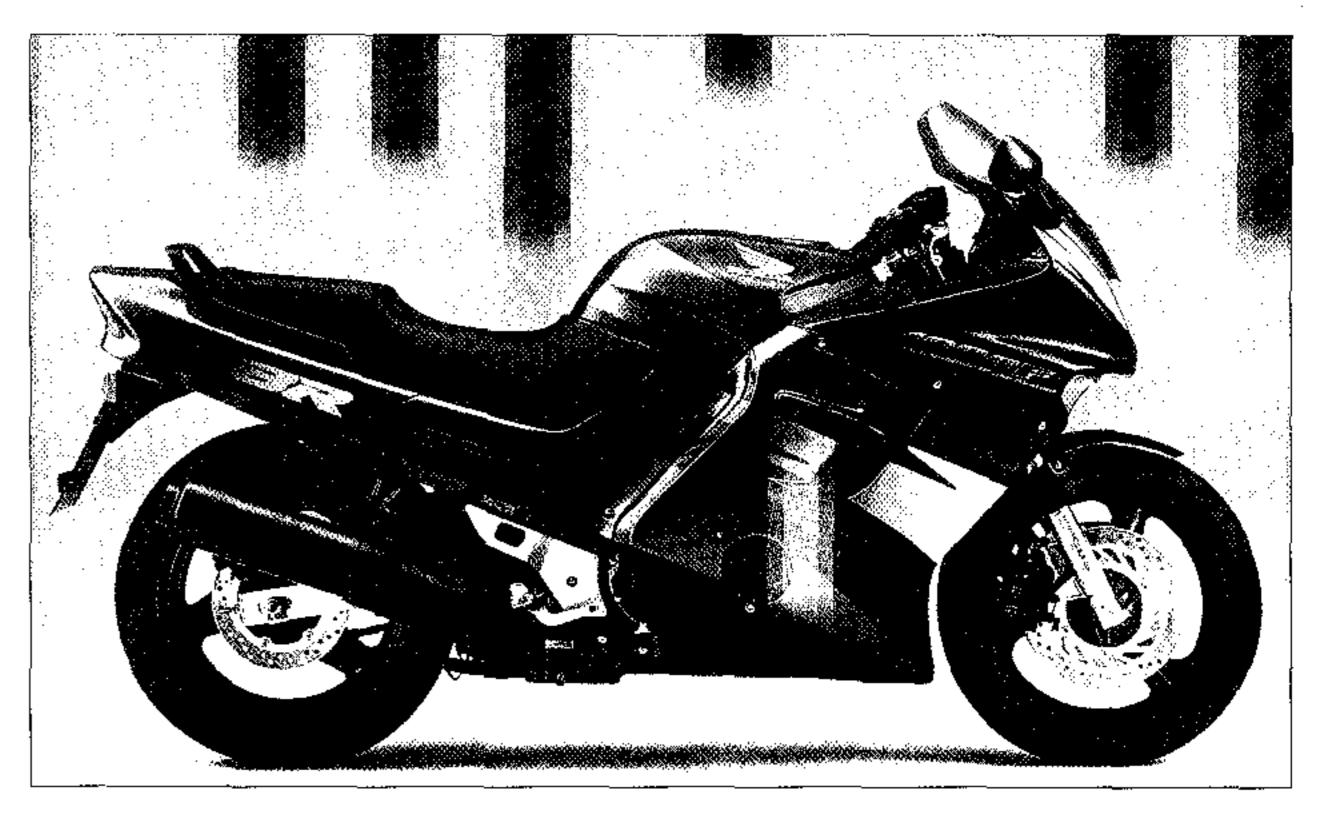
And then there was the NR750. This limitededition technological tour-de-force embodied many of Soichiro Honda's ideals. It used the latest techniques and materials in every component, from the oval-piston, 32-valve V4 motor to the titanium coating on the windscreen, it was - as Mr Honda would have wanted - the best it could possibly be. A fitting memorial to the man who has shaped the motorcycle industry and motorcycles as we know them today.

The Honda CBRs

he CBRs continued the Honda tradition of DOHC four-valves-per cylinder across-the-frame fours, but added water cooling for the first time. This was in line with industry trends, but eschewing expensive aluminium frames in favour of good old steel wasn't. Neither was the all-enclosing bodywork and big, flared front mudguard which some observers found a little bulbous for their tastes. Those air intake scoops either side of the headlight showed that the designers had spent a lot of time on the problem of feeding the motor with a supply of slightly pressurised, still air - internal aerodynamics they called it.

Aesthetics aside, there was no doubt that Honda achieved their design aims of over 130 bhp per litre from both the 600 and 1000 yet still managed to shrink the dimension of the motor compared to the aircooled fours in all directions. Valves were waisted, camshafts were hollow, piston rings thinned down, a typical inventory of Honda attention to detail. The valve gear consisted of rocker arms pivoting on balland-pillow joints in the head thus liberating room for a straight inlet tract with a good degree of downdraught. The layout bore a very close resemblance to the arrangement on the VFR750 which was launched a year before the CBRs.

The only internal differences between the 600 and 1000 were that the 600 had a balance shaft gear-driven directly off the crankshaft and the 1000 had its alternator mounted piggy-back behind the cylinders to keep its engine width acceptable. Both bikes avoided the fashionable pitfall of 16-inch front wheels and used 17-inch front wheels that gave quick steering without compromising stability.



The DCBS (Dual Combined Braking System) CBR1000F model

There wasn't anything startling about the spec sheet of the CBRs when they were new and in many ways there still isn't. It is therefore remarkable that the 600 effectively invented the Supersport 600 class and then continued to dominate it and fill the bestseller slot in countries all over the world. The first 600, the F-H stayed basically unchanged for four years until the F-M arrived in 1991. In that time, initial suspicion engendered mainly by its looks, disappeared as the CBR600 dominated the new Supersport 600 racing class and revealed itself as the best roadgoing all-rounder in its sector of the market. When the Supersport 600 class got its own TT in 1989, Steve Hislop won it on a CBR600 averaging over 112 mph for the 150-mile race. But unlike some other bikes in the class, the private owner could load his CBR600 up with

luggage and a passenger and go touring in

Up to the time of writing, the 600 had been comprehensively revamped twice but the 1000 has remained largely unchanged save for the suspension and bodywork being updated for the F-K model in 1989. The P-model that appeared in late '92 was used to showcase a mechanical linked-braking system that Honda hoped would give some of the advantages of electronic ABS without the

But where the 1000 was a perfectly good bike in the big sports tourer class, stuffed full of exceptional bikes, the CBR600 was a remarkable bike in a class that was at the cutting edge of both technology and sales. To achieve that with what at first sight looks like a conservative design is a remarkable feat.

Acknowledgements

ur thanks are due to APS Motorcycles of Wells, Bridge Motorcycle World of Exeter, and Paul Branson Motorcycles of Yeovil who supplied the motorcycles featured in the photographs throughout this manual. We would also like to thank the Avon Rubber Company, who kindly supplied fitting, and NGK Spark plugs (UK) Ltd for information on spark plug maintenance and electrode conditions.

Thanks are also due to Honda (UK) and Kel Edge for supplying the cover transparencies.

About this Manual

he aim of this manual is to help you get the best value from your motorcycle. It can do so in several ways. It can help you decide what work must be done, even if you choose to have it done by a dealer; it provides information and procedures for routine maintenance and servicing; and it offers information and technical assistance on tyre diagnostic and repair procedures to follow when trouble occurs.

> We hope you use the manual to tackle the work yourself. For many simpler jobs, doing it yourself may be quicker than arranging an appointment to get the motorcycle into a dealer and making the trips to leave it and pick it up. More importantly, a lot of money can be

saved by avoiding the expense the shop must pass on to you to cover its labour and overhead costs. An added benefit is the sense of satisfaction and accomplishment that you feel after doing the job yourself.

References to the left or right side of the motorcycle assume you are sitting on the seat, facing forward.

We take great pride in the accuracy of information given in this manual, but motorcycle manufacturers make alterations and design changes during the production run of a particular motorcycle of which they do not inform us. No liability can be accepted by the authors or publishers for loss, damage or injury caused by any errors in, or omissions from, the information given.

Professional mechanics are trained in safe working procedures. However enthusiastic you may be about getting on with the job at hand, take the time to ensure that your safety is not put at risk. A moment's lack of attention can result in an accident, as can failure to observe simple precautions.

There will always be new ways of having accidents, and the following is not a comprehensive list of all dangers; it is intended rather to make you aware of the risks and to encourage a safe approach to all work you carry out on your bike.

Asbestos

 Certain friction, insulating, sealing and other products - such as brake pads, clutch linings, gaskets, etc. - contain asbestos. Extreme care must be taken to avoid inhalation of dust from such products since it is hazardous to health. If in doubt, assume that they do contain asbestos.

Fire

 Remember at all times that petrol is highly naked flame around, when working on the vehicle. But the risk does not end there - a spark caused by an electrical short-circuit, by two metal surfaces contacting each other, by careless use of tools, or even by static electricity built up in your body under certain conditions, can ignite petrol vapour, which in a confined space is highly explosive. Never use petrol as a cleaning solvent. Use an approved safety solvent.

* Don't start the engine without first ascer-

x Don't suddenly remove the pressure cap

from a hot cooling system - cover it with a

cloth and release the pressure gradually first,

or you may get scalded by escaping coolant.

* Don't attempt to drain oil until you are

sure it has cooled sufficiently to avoid

x Don't grasp any part of the engine or

exhaust system without first ascertaining

* Don't allow brake fluid or antifreeze to

contact the machine's paintwork or plastic

x Don't siphon toxic liquids such as fuel,

hydraulic fluid or antifreeze by mouth, or

X Don't inhale dust - it may be injurious to

x Don't allow any spilled oil or grease to

remain on the floor - wipe it up right away,

x Don't use ill-fitting spanners or other

X Don't lift a heavy component which may

be beyond your capability - get assistance.

tools which may slip and cause injury.

that it is cool enough not to burn you.

allow them to remain on your skin.

health (see Asbestos heading).

before someone slips on it.

taining that the transmission is in neutral.

Remember...

scalding you.

components.

Always disconnect the battery earth terminal before working on any part of the fuel or electrical system, and never risk spilling fuel on to a hot engine or exhaust.

 It is recommended that a fire extinguisher of a type suitable for fuel and electrical fires is kept handy in the garage or workplace at all times. Never try to extinguish a fuel or electrical fire with water.

- Certain fumes are highly toxic and can quickly cause unconsciousness and even death if inhaled to any extent. Petrol vapour comes into this category, as do the vapours from certain solvents such as trichloroethylene. Any draining or pouring of such volatile fluids should be done in a well ventilated area.
- When using cleaning fluids and solvents, read the instructions carefully. Never use materials from unmarked containers - they may give off poisonous vapours.
- Never run the engine of a motor vehicle in an enclosed space such as a garage. Exhaust flammable. Never smoke or have any kind of fumes contain carbon monoxide which is extremely poisonous; if you need to run the engine, always do so in the open air or at least have the rear of the vehicle outside the workplace.

The battery

 Never cause a spark, or allow a naked light near the vehicle's battery. It will normally be giving off a certain amount of hydrogen gas, which is highly explosive.

x Don't rush to finish a job or take unverified short cuts.

x Don't allow children or animals in or

around an unattended vehicle. x Don't inflate a tyre above the recommended pressure. Apart from

overstressing the carcass, in extreme cases the tyre may blow off forcibly. ✓ Do ensure that the machine is supported securely at all times. This is especially important when the machine is blocked up

to aid wheel or fork removal. ✓ Do take care when attempting to loosen. a stubborn nut or bolt. It is generally better to pull on a spanner, rather than push, so that if you slip, you fall away from the

machine rather than onto it. ✓ Do wear eye protection when using power tools such as drill, sander, bench grinder etc.

✓ Do use a barrier cream on your hands prior to undertaking dirty jobs - it will protect your skin from infection as well as making the dirt easier to remove afterwards; but make sure your hands aren't left slippery. Note that long-term contact with used engine oil can be a health hazard.

Do keep loose clothing (cuffs, ties etc.) and long hair) well out of the way of moving mechanical parts.

 Always disconnect the battery ground (earth) terminal before working on the fuel or electrical systems (except where noted).

 If possible, loosen the filler plugs or cover when charging the battery from an external source. Do not charge at an excessive rate or the battery may burst.

 Take care when topping up, cleaning or carrying the battery. The acid electrolyte, evenwhen diluted, is very corrosive and should not be allowed to contact the eyes or skin. Always wear rubber gloves and goggles or a face shield. If you ever need to prepare electrolyte yourself, always add the acid slowly to the water; never add the water to the

Electricity

- When using an electric power tool, inspection light etc., always ensure that the appliance is correctly connected to its plug and that, where necessary, it is properly grounded (earthed). Do not use such appliances in damp conditions and, again, beware of creating a spark or applying excessive heat in the vicinity of fuel or fuel vapour. Also ensure that the appliances meet national safety standards.
- A severe electric shock can result from touching certain parts of the electrical system, such as the spark plug wires (HT leads), when the engine is running or being cranked, particularly if components are damp or the insulation is defective. Where an electronic ignition system is used, the secondary (HT) voltage is much higher and could prove fatal.

✓ Do remove rings, wristwatch etc., before | working on the vehicle - especially the electrical system.

✓ Do keep your work area tidy - it is only too easy to fall over articles left lying around.

Do exercise caution when compressing springs for removal or installation. Ensure that the tension is applied and released in a controlled manner, using suitable tools which preclude the possibility of the spring escaping violently.

✓ Do ensure that any lifting tackle used has a safe working load rating adequate for the

✓ Do get someone to check periodically? that all is well, when working alone on the

✓ Do carry out work in a logical sequence and check that everything is correctly assembled and tightened afterwards.

✓ Do remember that your vehicle's safety affects that of yourself and others. If in doubt on any point, get professional advice. If in spite of following these precautions,

you are unfortunate enough to injure

yourself, seek medical attention as soon as

Whether buying new, used or rebuilt parts, it Who specialises in parts for Honda motorcycles.

Identification Numbers 0.9

VIN (Vehicle Identification Number)

The frame Vehicle Identification Number (VIN) is stamped into the frame on the right side of the steering head. This is duplicated on a metal plate, riveted to the frame just behind the steering head.

The engine VIN is stamped into the crankcase. On 600 models it is on the right upper side of the crankcase, just behind the clutch operating arm, and on 1000 models it is situated on the front edge of the crankcase next to the crankcase mating surfaces. The VIN is made up of a model code, a serial code, the model year and the manufacturer's identification.

The VIN should be recorded and kept in a safe place so it can be quoted to law enforcement officials in the event of theft. The VIN should also be stated when purchasing or ordering parts for the machine. It is a good idea to write it on a card and keep tucked away with your drivers licence, then it will be handy when you need it.

The VIN can be used to identify the actual model of machine using the accompanying list. Note that the dates given refer to the year of production by Honda - this is not necessarily the same as the date of sale or registration.

Buying spare parts

Once you have located all the VIN numbers, record them for reference when buying parts. Since the manufacturers change specifications, parts and vendors (companies that manufacture various components on the machine), providing the VIN numbers is the only way to be sure you are buying the correct parts.

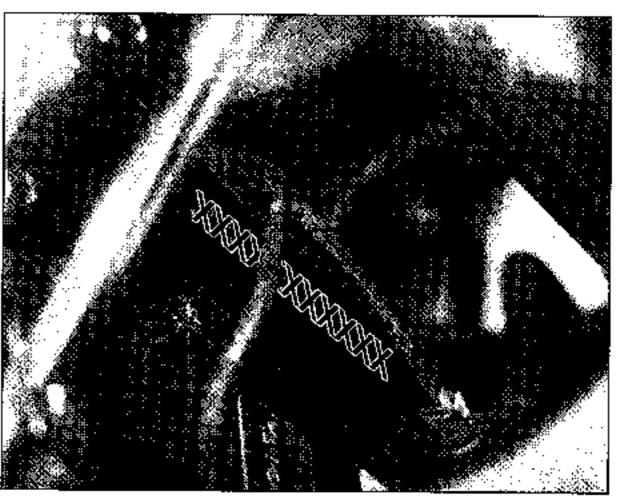
Whenever possible, take the worn component to the dealer so direct comparison can be made with the new component. Along the trail from the manufacturer to the parts shelf, there are numerous places the part can end up with the wrong number or be incorrectly listed.

The two places to purchase new motorcycle parts - franchised dealers and independent accessory stores - differ in the type of parts they carry. While a dealer can obtain virtually every stock part on the motorcycle, as well as aftermarket items, the accessory dealer is usually - not always limited to such items such as shock absorbers, tune up parts, engine gaskets, cables, brake parts, etc. Often, however, an accessory outlet will sell aftermarket suspension components. cylinders, transmission gears and other major components.

Used parts can be obtained for roughly half the price of new ones, but you can't always be sure of what you are getting. Once again, take the worn part to the salvage yard (breaker) for direct comparison.

is a good idea to deal directly with someone

Model year	Model code	Engine VIN	Frame VIN	
UK CBR600				
1987	CBR600F-H	PC19E-2000081 to 2019843	PC19-2000017 to 2008955	
1988	CBR600F-J	PC19E-2102061 to 2114053	PC19-2100101 to 2108645	
1989	CBR600F-K	PC23E-2000049 on	PC23-2000144 on	
1990/1	CBR600F-L	PC23E-2100677 on	PC23-2100659 on	
	_	9-state model:		
1987	CBR600F-H*	PC19E-2000032 to 2019534	PC190*HM000014 to 008281	
1988	CBR600F-J*	PC19E-2100006 to 2019020	PC190*JM100004 to 105415	
1989	CBR600F-K	PC19E-2200001 to 2206643	PC190*KM200001 to 204860	
1990	CBR600F-L	PC23E-2100015 on	PC230*LM000004 on	
		California model:		
1987	CBR600F-H*	PC19E-2000022 to 2019020	PC191*HM000002 to 002523	
1988	CBR600F-J*	PC19E-2100365 to 2113305	PC191*JM100003 to 101632	
1989	CBR600F-K	PC19E-2202101 to 2206333	PC191*KM200001 to 201434	
1990	CBR600F-L	PC23E-2100022 on	PC231*LM000005 on	
UK CBR1000) F:			
1987	CBR1000F-H	SC21E-2000033 to 2017564	SC21-2000021 to 2012950	
1988	CBR1000F-J	SC21E-2105332 to 2114793	SC21-2100865 to 2110310	
1989	CBR1000F-K	SC09E-2000035 on	SC24-2000028 on	
1990	CBR1000F-L	SC09E-2100696 to 2106547	SC24-2100706 to 2105980	
1991	CBR1000F-M	SC09E-2200803 to 2205358	SC24-2200765 to 2205070	
1992	CBR1000F-N	Not available	Not available	
1993	CBR1000F-P	SC09E-2400017 to 2403062	SC24-2400033 to 2402908	
1994	CBR1000F-R	SC09E-2500179 to 2503368	SC24-2500177 to 2502859	
1995	CBR1000F-S	SC24E-2600529 on	SC24-2600420 on	
1996	CBR1000F-T	SC24E-2700001 on	SC24A-TM000001 on	
US CBR1000	F (*Hurricane)	49-state model:		
1987	CBR1000F-H*	SC21E-2000041 to 2016805	SC210*HA001001 to 004855	
1988	CBR1000F-J*	SC21E-2100001 to 2103504	SC210*JA100001 to 100480	
1989	No model produ	uced		
1990	CBR1000F-L	SC24E-2000001 on	SC240*LM000001 on	
1991	CBR1000F-M	SC24E-2100001 to 2101985	SC240*MM100001	
			to MM101643	
1992	No model produ	uced		
1993	CBR1000F-P	Details not available		
1994	CBR1000F-R	Details not available		
1995	CBR1000F-S	Details not available		
1996	CBR1000F-T	Details not available		
US CBR1000	F (*Hurricane)	California model:		
1987	CBR1000F-H*	SC21E-2000064 to 2014846	SC211*HA001003 to 004975	
1988	CBR1000F-J*	SC21E-2102301 to 2104018	SC211*JA100001 to 100722	
1989	No model produ			
4000	0004000	00045	·	



No model produced

CBR1000F-P

CBR1000F-R

CBR1000F-L SC24E-2000001 on

CBR1000F-S Details not available

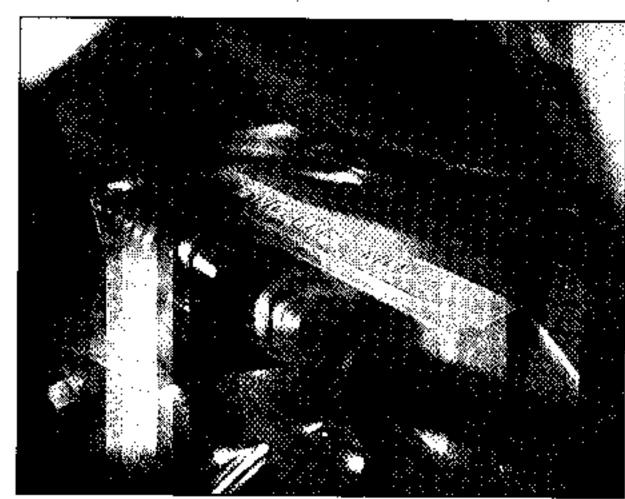
CBR1000F-T Details not available

CBR1000F-M SC24E-2100001 to 2101112

Details not available

Details not available

Frame VIN location



SC241*LM000001 on

SC241*MM100001

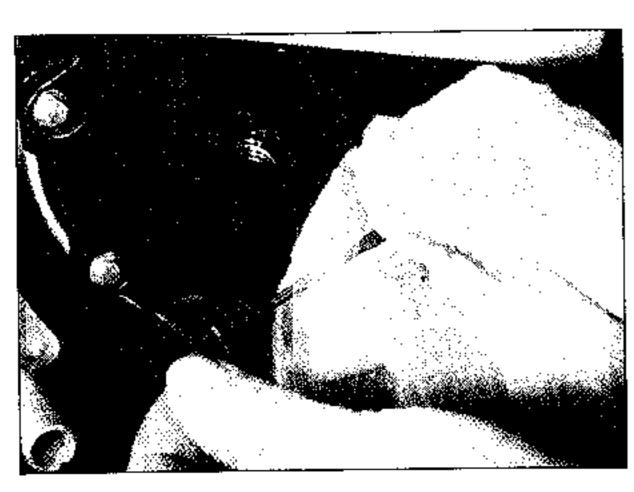
to MM100341

Engine VIN location - 600 models

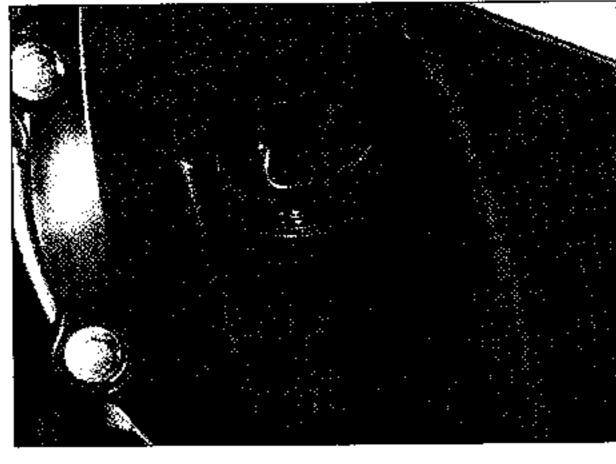
possible.

Note: The daily (pre-ride) checks outlined in the owner's manual covers those items which should be inspected on a daily basis.

Engine/transmission oil level



Unscrew the filler cap/dipstick from the right crankcase cover and wipe it clean.



Insert the dipstick so that the filler cap threads are just resting on the crankcase cover - do not screw it in.



Before you start:

✓ Start the engine and let it idle for a few minutes, allowing it to reach normal operating temperature. Do not run the engine in an enclosed space such as a garage or workshop.

✓ Stop the engine and place the motorcycle on its centrestand. Allow it to stand undisturbed for about five minutes to allow the oil level to stabilise. Make sure the motorcycle is on level ground.

Bike care:

 If you have to add oil frequently, you should check whether you have any oil leaks. If there is no sign of oil leakage from the joints and gaskets the engine could be burning oil (see Fault Finding).

The correct oil

- Modern, high-revving engines place great demands on their oil. It is very important that the correct oil for your bike is used.
- Always top up with a good quality motor oil of the specified type and viscosity and do not overfill the engine. If the engine is inadvertently overfilled, excess oil can be removed using an empty plastic squeeze pack such as that used for gear oils.

Oil type	API grade SF or SG
Oil viscosity	SAE 10W40

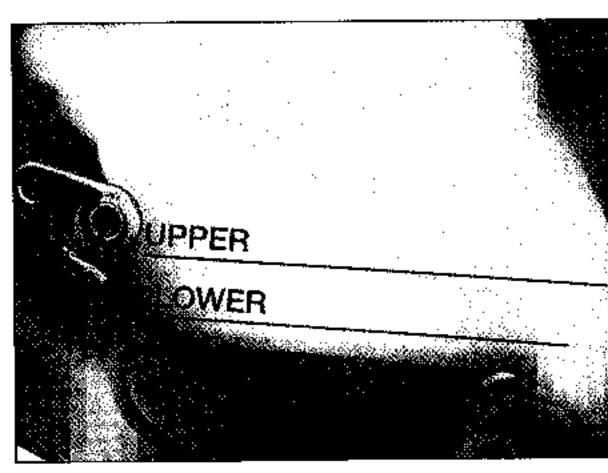
The oil level should lie between the marks on the end of the dipstick.



4 Add the specified oil to restore the oil level.

2 Coolant level

Warning: DO NOT remove the radiator pressure cap to add coolant. Topping up is done via the coolant reservoir tank filler. DO NOT leave open containers of coolant about, as it is poisonous.



Coolant level must lie between upper and lower marks on reservoir with engine running - 1000 model shown.

Before you start:

✓ Make sure you have a supply of coolant available (a mixture of 50% distilled water and 50% corrosion inhibited ethylene glycol antifreeze is needed).

✔ Place the motorcycle on its centre stand



Stop the engine. If the level is low, remove the filler cap and top up to the upper level mark using only the specified coolant.

whilst checking the level. Make sure the motorcycle is on level ground.

✓ Remove the right sidepanel and on 1000 models also remove the seat. Start the engine - the coolant level check is made with the engine running.

Bike care:

- Use only the specified coolant mixture. It is important that antifreeze is used in the cooling system all year round, not just during the winter months. Don't top-up with water alone, as the antifreeze will become too diluted.
- Do not overfill the reservoir tank. If the coolant is significantly above the upper line at any time, the surplus coolant should be siphoned off to prevent it from being expelled out of the breather hose when the engine is running.
- If the coolant level falls steadily, check the system for leaks as described in Chapter 1. If no leaks are found and the level still continues to fall, it is recommended that the machine be taken to a Honda dealer who will pressure test the system.

3 Brake fluid levels

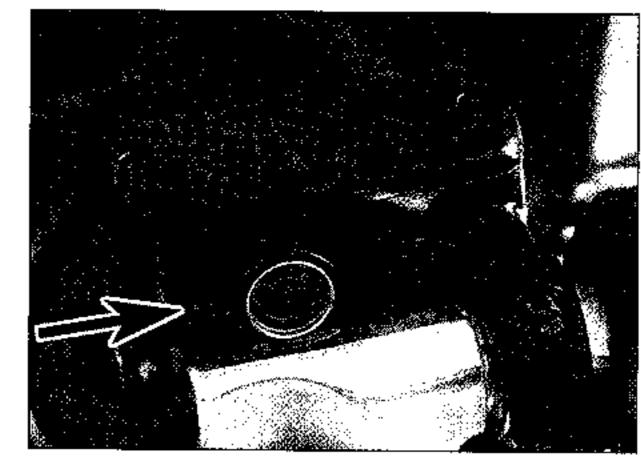
Warning: Hydraulic fluid can harm your eyes and damage painted surfaces, so use extreme caution when handling and pouring it. Do not use fluid that has been standing open for some time, as it absorbs moisture from the air which can cause a dangerous loss of braking effectiveness.

Before you start:

- ✔ Position the motorcycle on its centrestand and turn the handlebars until the top of the master cylinder is as level as possible.
- ✓ On 1000 models, remove the right sidepanel for access to the rear brake fluid reservoir. This isn't necessary on 600 models due to the inspection slot in the panel.
- ✓ Make sure you have the correct hydraulic. fluid. DOT 4 is recommended.

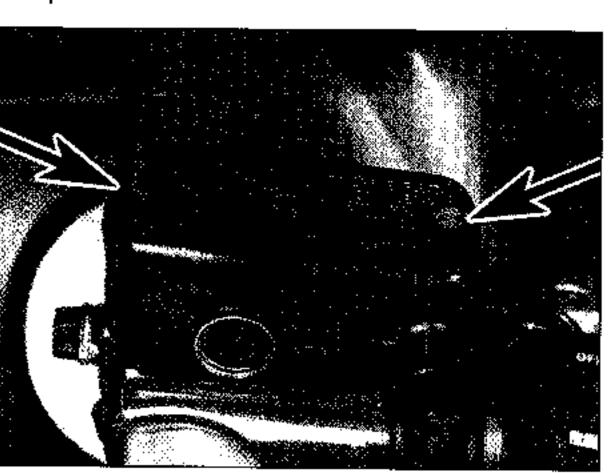
Bike care:

- The fluid in the master cylinder reservoirs will drop slightly as the brake pads wear down.
- If either fluid reservoir requires repeated topping-up this is an indication of an hydraulic leak somewhere in the system, which should be investigated immediately.

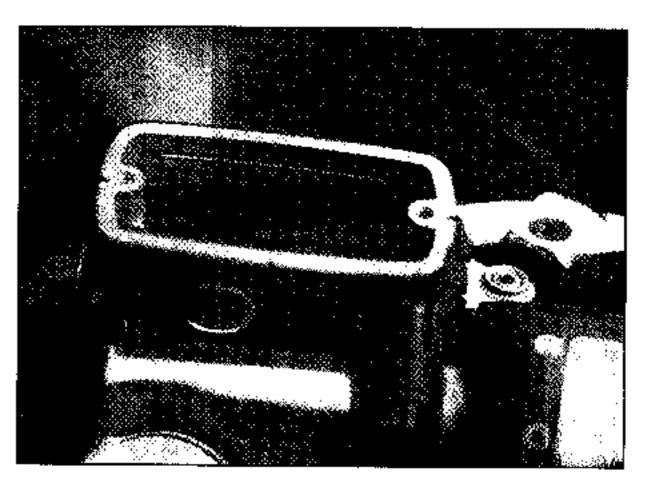


Front brake fluid level is checked via sightglass - it must be above lower level line (arrow).

- Check for signs of fluid leakage from the hydraulic hoses and components - if found, rectify immediately.
- Check the operation of both brakes; if there is evidence of air in the system (spongy feel to lever or pedal), it must be bled as described in Chapter 7.



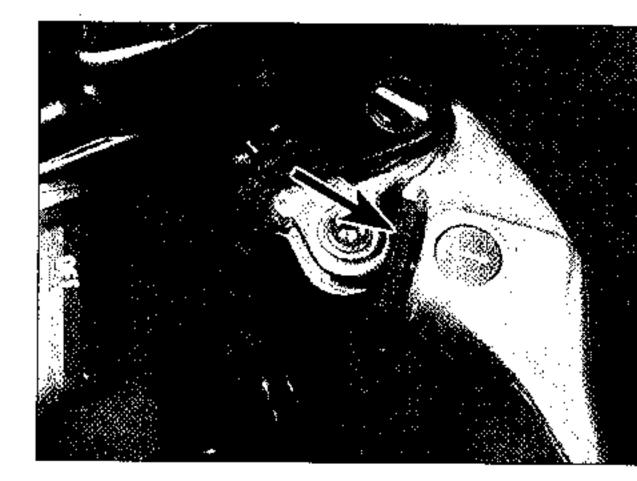
Remove the two screws (arrows) to free the front brake reservoir cap.



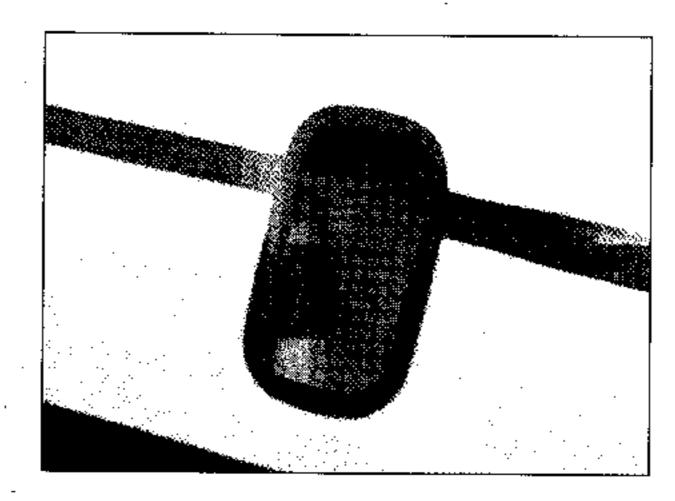
Top up with new clean hydraulic fluid of the recommended type to the upper mark cast on the front inside face of the reservoir. Take care to avoid spills (see Warning above).



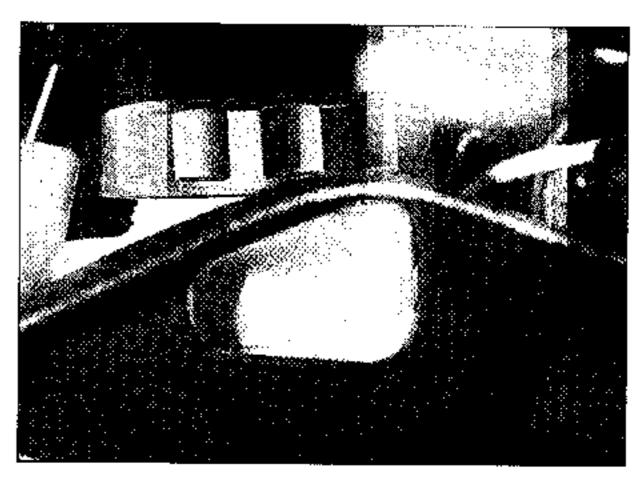
Ensure that the diaphragm is correctly folded before installing the float (where fitted) diaphragm, plate and cover.



Some models have a span adjuster on the brake lever - check that the adjuster wheel notch aligns with the arrow on the lever (arrow).



On 600 models, the rear brake fluid level Can be seen through slot in right sidepanel. Fluid must lie between upper and lower lines.



On 1000 models, remove the right sidepanel to view the rear brake fluid level. Fluid must lie between upper and lower lines.



Unscrew the cap and lift out the plate O and diaphragm to add fluid on 1000 models.

4 Clutch fluid level (1000 models)

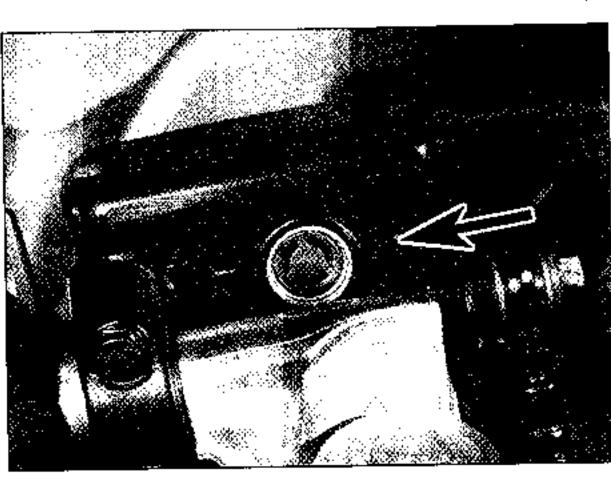
Warning: Hydraulic fluid can harm your eyes and damage painted surfaces, so use extreme caution when handling and pouring it. Do not use fluid that has been standing open for some time, as it absorbs moisture from the air which can cause a loss of clutch effectiveness.

Before you start:

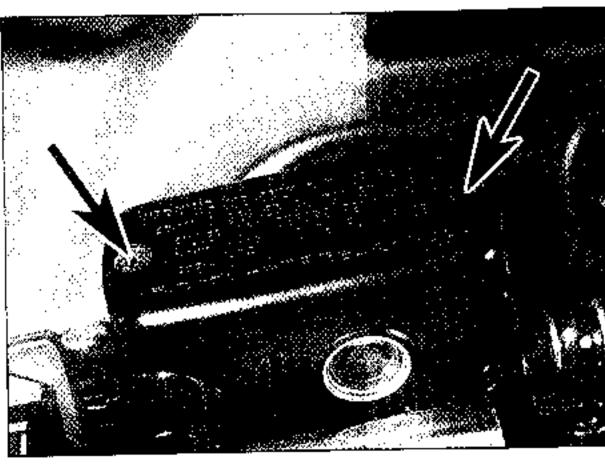
- ✓ Position the motorcycle on its centrestand and turn the handlebars until the top of the master cylinder is as level as possible.
- ✓ Make sure you have the correct hydraulic fluid. DOT 4 is recommended.

Bike care:

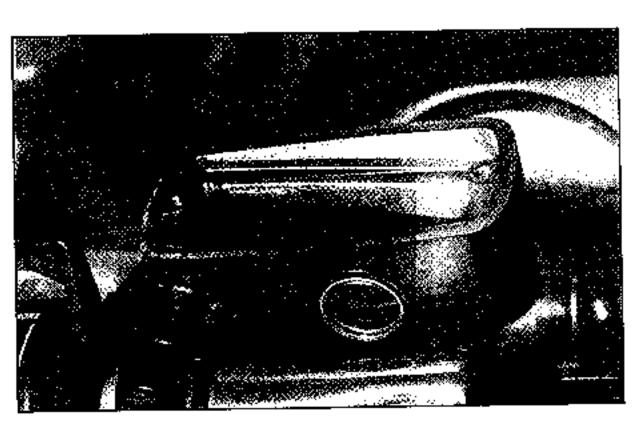
- If the fluid reservoir requires repeated topping-up this is an indication of an hydraulic leak somewhere in the system, which should be investigated immediately.
- Check for signs of fluid leakage from the hydraulic hoses and components - if found, rectify immediately.
- Check the operation of the clutch; if there is evidence of air in the system (spongy feel to lever), it must be bled as described in Chapter 7.



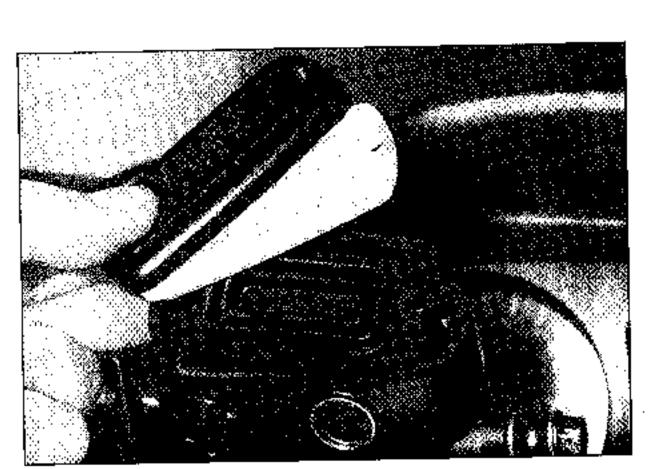
Clutch fluid level is checked via sightglass - it must be above lower level



2 Remove the two screws (arrows) to free the reservoir cap.



Top up with new clean hydraulic fluid of the recommended type to the upper mark cast on the front inside face of the reservoir.



4 Ensure that the diaphragm is correctly folded before installing the plate and cover.

7 Tyres

comfort.

The correct pressures:

The tyre pressures must be checked when

cold, not immediately after riding. If the

motorcycle has just been ridden the tyres will

be warm and their pressures will have

increased. Note that extremely low tyre

pressures may cause the tyre to slip on the

rim or come off. High tyre pressures will cause

Proper air pressure will increase tyre life

and provide maximum stability and ride

abnormal tread wear and unsafe handling.

Use an accurate pressure gauge.

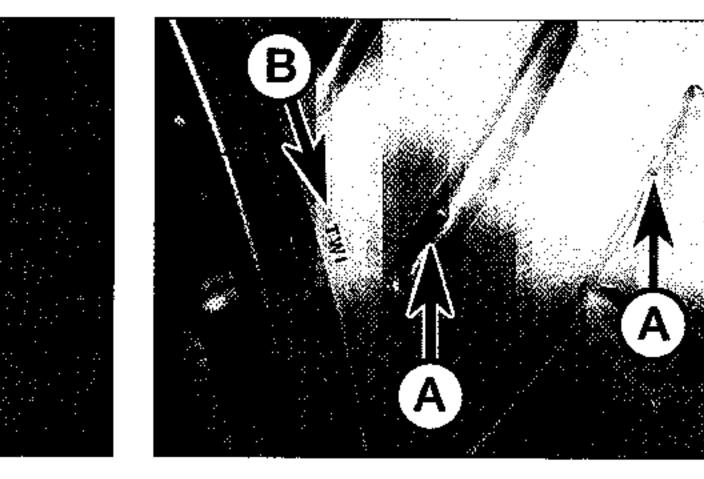
Check the tyre pressures when the tyres are **cold** and keep them properly inflated.

Tyre care:

- Check the tyres carefully for cuts, tears, embedded nails or other sharp objects and excessive wear. Operation of the motorcycle with excessively worn tyres is extremely hazardous, as traction and handling are directly affected.
- Check the condition of the tyre valve and ensure the dust cap is in place.
- Pick out any stones or nails which may have become embedded in the tyre tread. If left, they will eventually penetrate through the casing and cause a puncture.
- If tyre damage is apparent, or unexplained loss of pressure is experienced, seek the advice of a tyre fitting specialist without delay.

Tyre tread depth:

- At the time of writing UK law requires that tread depth must be at least 1 mm over 3/4 of the tread breadth all the way around the tyre, with no bald patches. Many riders, however, consider 2 mm tread depth minimum to be a safer limit. Honda recommend a minimum tread depth of 1.5 mm (0.06 in) for the front tyre, and 2.0 mm (0.08 in) for the rear.
- Many tyres now incorporate wear indicators in the tread. Identify the triangular pointer or TWI mark on the tyre sidewall to locate the indicator bars and replace the tyre if the tread has worn down to the bar.



3 Tyre tread wear indicator bars (A) and location marking on sidewall (B).

Loading/speed	Front	Rear
All 600 models and 1000 K models onward	36 psi (2.5 Bar)	42 psi (2.9 Bar)
1000 H, J models: Up to 90 kg (198 lb) load - solo	36 psi (2.5 Bar)	42 psi (2.9 Bar)
90 kg (198 lb) to max load* - pillion	42 psi (2.9 Bar)	42 psi (2.9 Bar)

Measure tread depth at the centre of the

tyre using a tread depth gauge.

5 Suspension, steering and final drive

Suspension and Steering:

- Check that the front and rear suspension
- operates smoothly without binding.
 Check that the suspension adjustment settings are as required.
- Check that the steering moves smoothly from lock-to-lock.

Drive chain:

- Check that drive chain slack isn't excessive.
- If the chain looks dry, lubricate it See Chapter 1.



Check the drive chain for correct tension.

6 Legal and safety checks

Lighting and signalling:

- Take a minute to check that the headlamp, taillamp, brake stop lamp and turn signals all work correctly.
- Check that the horn sounds when the switch is operated.
- A working speedometer is a statutory requirement in the UK.

Safety:

- Check that the throttle grip rotates smoothly and snaps shut when released.
- Check that the engine shuts off when the kill switch is operated.
- Check that sidestand return spring holds the stand securely up when retracted. The same applies to the centrestand.

Fuel:

- This may seem obvious, but check that you have enough fuel to complete your journey. If you notice signs of fuel leakage - rectify the cause immediately.
- Ensure you use the correct grade unleaded fuel - see Chapter 1 Specifications.

Notes

Chapter 1

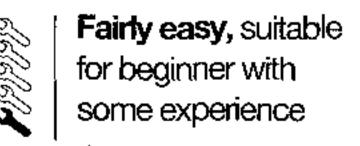
Routine maintenance and Servicing

Contents

Air cleaner element - cleaning	Engine/transmission oil and filter - change
Air cleaner element - renewal	Evaporative emission control system hoses - check
Battery - checks 6	(California models)
Brake and clutch fluid - renewal	Fasteners - tightness check
Brake pads - wear check	Fuel pipe and filters - inspection
Brake system - check	Headlight aim - check 2
Carburettors - synchronisation	Secondary air supply system - check (California models) 1
Clutch - check (1000 models)	Side stand - check
Clutch - check (600 models)	Spark plugs - check
Control cables and pivot points - lubrication 9	Spark plugs - renewal (US 1000 L models onwards and all
Coolant - renewal	UK models
Cooling system - checks	Steering and suspension - checks and adjustment
Crankcase breather - draining (1000 models) 4	Throttle and choke cable - freeplay check
Drive chain - adjustment and lubrication	Valve clearances - check
Drive chain slider - wear check	Wheels - inspection
Engine idle speed - check	

Degrees of difficulty

Easy, suitable for novice with little experience



able **Fair** n **Suit** e **D**IY

Fairly difficult, suitable for competent DIY mechanic Difficult, suitable for experienced DIY mechanic

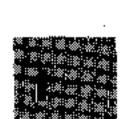
Very difficult,
suitable for exper
DIY or profession



Oil capacity at oil change:

Engine

600 models	3.0 lit (3.2 US qt, 5.3 lmp pt) Not available
Oil capacity at oil and filter change:	1401 avanabio
600 models , ,	3.4 lit (3.6 US gt, 6.0 Imp pt)
1000 models	3.8 lit (4.0 US qt, 6.7 lmp pt)
Oil capacity after disassembly:	
600 models	4.0 lit (4.2 US qt, 7.0 lmp pt)
1000 models	4.5 lit (4.8 US qt, 8.0 Imp pt)
Coolant capacity:	
600 models	2.0 lit (2.1 US qt, 3.5 lmp pt)
1000 models	3.0 lit (3.2 US qt, 5.3 lmp pt)
Spark plug type:	
All 600 models and 1000 T model onward	NGK DPR8EA-9 or ND X24EPR-U9
1000 H, J, K, L, M, N, P, R, S models	NGK DPR9EA-9 or ND X27EPR-U9
Spark plug gap	0.8 - 0.9 mm (0.032 - 0.035 in)
Inlet valve clearance (cold):	
600 models	
1000 models	$0.10 \pm 0.02 \text{ mm} (0.004 \pm 0.001 \text{ in})$
Exhaust valve clearance (cold):	0.40 0.00 (0.007 0.000/)
600 models	0.18 - 0.22 mm (0.007 - 0.009 in)
1000 H, J, K, L, M, N models	0.16 ± 0.02 mm (0.006 ± 0.001 in)
1000 P models onward	$0.18 \pm 0.02 \text{ mm} (0.007 \pm 0.001 \text{ in})$
Idle speed:	1000 - 100
600 California models	1300 ± 100 rpm
All other 600 models	1200 ± 100 rpm
1000 L California models	1050 ± 100 rpm
1000 P onward California models	1100 ± 100 rpm
All other 1000 models	1000 ± 100 rpm



Maintenance Schedule 1-3

1-2 Maintenance & Servicing

Miscellaneous			
Freeplay adjustments:			
Throttle cable freeplay - at twistgrip flange	2 - 6 mm (0.08 - 0.24 in)		
Clutch cable freeplay (600 models) - at lever ball end	10 - 20 mm (0.4 - 0.8 in)		
Final drive chain	15 - 25 mm (0.6 - 1.0 in)	•	
Front forks:			
Standard air pressure - all 600 models and 1000 H, J models	0 - 6 psi (0 - 0.4 Bar)	•	
Tyre pressures - cold	Front	Rear	
1000 H and J models:		_ .	
Up to 90 kg (198 lb) - solo	36 psi (2.5 Bar)	42 psi (2.9 Bar)	
90 kg (198 lb) to max load - pillion	42 psi (2,9 Bar)	42 psi (2.9 Bar)	
All 600 models and 1000 K onwards	36 psi (2.5 Bar)	42 psi (2.9 Bar)	
Refer to Dimensions and Weights in the Reference part of this Manual	for details of maximum vehicle	vehicle loading	
Tyre tread depth - minimum limit	1.5 mm (0.06 in)	2.0 mm (0.08 in)	
At the time of writing, UK law requires that tread depth must be at least	1 mm over 3/4 of the tread brea	th all the way around the tyre.	
Torque settings	kgf m	lbf ft	
Rear axle nut:			
600 models	9.0	65.0	
1000 H, J, K, L, M, N models	9.5	69.0	
1000 P models onward	9.3	67.0	

	05.0
. 9.0	65.0
. 9.5	69.0
	67.0
. 2.2	16.0
	10.0
. 2.7	20.0
	13.0
	1.8
. 2.3	17.0
	0.8
	es e
3.5	25.0
	28.0
^ ^	22.0
	7.0
. 2.3	17.0
	. 2.2 . 1.4 . 2.7 . 1.8 . 0.25 . 2.3 . 1.1 . 3.5 . 3.8 . 3.0 . 1.0

Recommended flu	uids and lu	bricants
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Recommended fluids and lubricants	
Engine: Recommended oil	Honda 4-stroke oil or equivalent good quality SAE 10W40 SF or SG motor oil
Fuel grade Coolant Brake and clutch fluid Final drive chain Wheel bearings and speedometer drive Steering head bearings Swingarm and suspension linkage pivots All control pivots, stand pivots and throttle twistgrip Control cables	Unleaded, minimum octane rating 91 (RON/RM) 50% distilled water/50% corrosion inhibited ethylene glycol antifreeze DOT 4 specification SAE 90 gear oil or aerosol lubricant suitable for O-ring chains High melting-point grease General purpose grease Molybdenum disulphide grease Chain and cable lubricant, motor oil or light grease Light machine oil or cable lube
	:

Note: The intervals listed below are recommended by the manufacturer.	Your owner's manual may have different intervals for your model.
Daily (pre-ride) See "Daily (pre-ride) checks" at the beginning of this manual. Every 600 miles (1000 km) Adjust and lubricate the final drive chain (Section 1). Six monthly, or every 4000 miles (6000 km) Perform all of the daily (pre-ride) checks plus: Renew the spark plugs - US 600 and 1000 H and J models (Section 2). Check the spark plugs - US 1000 L-onwards and all UK models (Section 2). Clean the air cleaner element (Section 3). Clean the crankcase breather - 1000 models (Section 4). Check engine idle speed and adjust if necessary (Section 5). Check the battery (Section 6). Check the brake pads for wear (Section 7). Check the clutch operation - 600 models (Section 8). Lubricate all control cables and pivot points (Section 9).	 Synchronise the carburettors (Section 14). Check the clutch operation - 1000 models (Section 15). Check the fuel pipe for signs of leakage and clean or renew the fuel filters (as applicable) (Section 16). Check all coolant pipes and hoses for signs of leakage (Section 17). Check the secondary air supply system hoses for signs of damage and renew if necessary - US California models (Section 18). Check the operation of the steering and suspension (Section 19). Check the wheels for damage (Section 20). Check the brake system (Section 21). Check the drive chain slider for wear (Section 22). Check the side stand (Section 23). Check the headlight aim (Section 24). Check all nuts and bolts for tightness using the specified torque settings where given (Section 25). Every 18 months, or every 12,000 miles (18,000 km) All of the items above plus: Renew the air cleaner element (Section 26). Check evaporative emission control system hoses for signs of damage and renew if necessary - US California models (Section 27).
Annually, or every 8000 miles ###################################	Two yearly, or every 12,000 miles (18,000 km) All of the items above plus: Renew the brake fluid (Section 28). Renew the clutch fluid - 1000 models (Section 28). Two yearly, or every 24,000 miles (36,000 km) All of the items above plus: