

# WHAT HAPPENED TO THE ITALIAN HUSKY WITH SWEDISH BLOOD

## HUSQVARNA 510 1989 "B"

MCDE Motocross d'Epoca, 1-2019

"Husqvarna 510 1989-B, che fine ha fatto l'italiana con sangue svedese"

Translation by Luigi Abici

### THE COMPANY AND THE BRAND

The Husqvarna Company was born and then developed as foundry and arms industry, later expanding into the various sectors of domestics, ovens, sewing machines, bicycles, motor vehicles.

Already in 1903 Husqvarna engines and motorcycles began a flattering history, to date a story over a century long, as can be seen in the famous Company Museum in the town of Huskvara, at the company's historic headquarters.

The famous Brand had motorized all post-war Sweden. Changing vocation, from 1961-62 the "Husqvarna Motorcyclar" dedicated itself especially to satisfying the leisure of wealthy boys, focusing on off-road machines, enduro and crosscountry. He timidly landed overseas in 1964, California, and began a memorable success throughout the all United States. From 1969 it expanded in Northern Europe with a large series productions, motorizing some emerging brands and beginning illustrious clones, such



as the Penton (Ktm). From 1978 it passed under the Electrolux Group, with which the defining turn took place. Electrolux had a dumb view of this business. While investing in research and development on engines (clear was the aim, the garden machines), it was unwilling to the innovation of the machine, rebuffing the refined Japanese and snubbing at the time the other companies that were selling motorcycles water cooled, with rear monoshock, disc brakes, and were flattering the customers eyes with newer

looking and pleasant appeal. The Swedish bike was really reliable, with a better engine, a races winner, but year after year it became only for specialists and less so for the flock of main public.

In Italy - let's say it - a Husqvarna was an alien mechanism, a bit snobby, inspected by curious as a CZ or a Ural.

In 1985, by now the orange was been squeezed. Death sentence: too employees versus the sales collapse.

The models in the catalogue were so many, and chaotic;

The Husqvarna 510 TE 1989B of the article author, Luca Pellegrini. The bike is in perfect state of use. The 1989B TE model can be distinguished by the water pump bumper and the double exhaust on the left. This bike is like factory, except for some self made elements (tail handles and protections). Decals partially missing.

10,000 bikes produced per year were reached, an almost impossible quantity to pursue in a market invaded by Japanese motorcycles.

So Electrolux restricted the main company mission to "home-machinery" for Husqvarna (chainsaws and gardening), then the motorcycles business was decommissioned. Last but not least, the Swedish Government gave the green light, despite that Husqvarna remained the last one national company in the motorcycle industry.

The business transfer plan took place through the entry of a qualified business partner, selected for technical skills, capacity and commercial convergence on the market. Last but not least there was settled a gentleman's agreement, from the businessmen: "to buy and sell, but honouring the brand". We are at 1986, 1st April and we are talking about Cagiva (Castiglioni Giovanni, Varese). (REF. 1)

At the end of 1986 Cagiva Spa and Husqvarna Motorcyklar AB - just to begin to know each other - set up a single merged commercial network for both brands, then a "joint venture" for a product, which leads to the birth of the WRK 125, a twist on the Husqvarna catalogue in 1987. From 1987 to 1988 the two Companies formed a partnership temporary company "Cagiva-Husqvarna" (today we call it as "Strategic Business Unit", under capital exchange); in

1987 (1988 catalogue) the technicians started tackling the 2 strokes line: the MX was been surrounded for the Cagivas "pure italian" and the Husqvarnas, substantially, went to the enduro. Only some touches over the models 510 and big bore 2 strokes, that were still produced in the Odeshog plant, north of Huskvarna.

At the end of 1987, it was finished the long support from the Swedish staff to allow the continuity of skills and the transfer of know-how and technology of production of these bikes. Not everyone knows that in Husqvarna company there were the beauty of 18 members of Research and Development personnel, 8 riders included.

Since 1988, Cagiva, now in the majority share (now was starting to invoice from Italy), lead to run out the assembly line of 510 models and the big 2-stroke, the only ones currently built in the swedish plant, that now became a controlled and "headless" factory.

In Odeshog still were remaining frames, engines and components of current production, mainly used to built up the motorcycles models "1989". Then, but it is not clear, there were trade union agreements with employees and contracts still in place with suppliers, to produce some items. The Cagiva moreover had yet to run and establish the network of mouldings and sub-suppliers of mechanical

components, in the context of Italian companies.

In the 1989 commercial offer, among the nine models in the catalogue there was still much of the Nordic product, the two 510 cross and enduro models, the 2-stroke 400WR and two warehouse leftovers, the 430CR and the "swedish native", the automatic 430AE. The generalist line 125-250-260, that's 2-stroke, was fully italianate.

With the beginning of 1989, at the end of the partnership, the Husqvarna brand switched finally the Castiglioni family. The Italians were get busy in homeland, to reorganize of the company's activity, warehouses, production. The wide Spare Parts Warehouse of past productions, ended up at auction, a bargain for those who was hanging out in the "pure Sweden" vintage market, that's the whole of the great past history of the brand. Even a lot was thrown away: someone told that even an entire container of iron tanks from 1981-83 was sent to the foundry.

The Swedish plant was cleaned out of everything (at least we mention the picking up of the jigs, for the frames) and finally given back to Electrolux. The production of chainsaws and lumberjacks equipment will start there the following year.

Let us dwell now on the events of the Model "510", the "Five-Ten", in short: "The Husky".

The famous four-stroke enduro /

cross model was redesigned for 1987 year, with a liquid-cooled engine, after three seasons of enduro tests and victories, over the prototype of the champion Thomas Gustavsson. It was this singular one 510, called TELC (4 Takt Enduro - Liquid Cooled), the first liquid cooled four-stroke single cylinder, "bugged and aped" by racing teams and brands. With Cagiva the 510 became the major privileged machine of Design Department, and was improved immediately, in 1988 (Remember that...? In the 1987 models the hot parts, in magnesium alloy, were corroded in the engine).

Everything was now in the ruling. On December 3, 1987, a symbolic ceremonial took place at the Odeshog plant. The rider SvenErik Jonsson rode the last 510 "Made in Sweden", TE5108S027687, engine 2222-0255. A doozy for collectors, but ended up directly at the company museum. The Swedish epopee was thus closed.

After that, anyway in Odeshog plant still bikes was remaining, in stores and in the production line, frames and engines, few of them

emigrated to Italy as spare parts. Components were then moved from the assembly islands, some of which ended up in after-sales spare parts (emblematic of the case of radiator conveyors, many of them already provided with 1988 decals, which up until now are disturbing the aesthetics of many 510 restored). However, it was necessary to lighten the stocks as much as possible; it was therefore decided to get the aim by creating two models, identical except for the engine: the 510 and the 400 WR mentioned above.

Between 1988 and 1989 a pre-series called "1989-A" was assembled, 500 motorcycles between enduro TE, cross TC and american TX, thus complying with the old Swedish market mix. 1989-A was actually a 1988 model, with the exception of small details, front headlight and front suspension, a upside-down White Power 4054, which finally sent to the Museum the famous but obsolete traditional Swedish fork. Today it is really difficult, if not really impossible, cause of the signs of aging, to distinguish the 1989-A model

from the 1988 one.

Meanwhile, a small amount of 1988 "pure" bikes, left in storage, were sent at a good price in the Argentina market, passing through the United States, from 1989 and up to 1994, under the option "km 0", even still in crates. The survived machines are still miscalled as "510-1989" because registered in that year, then because in South America the regular 1989 models never arrived.

Also, bunches of 510 from 1988 still in the warehouse were sold in Europe as 1989-A, updating some of the components as explained above and with stickers of the new model.

As for the US market, which was based in Fairfield, New Jersey (the other site, formerly Ducati, was in California), there wasn't few controversy between Cagiva and old pro-Swedish Husqvarna dealers. Perhaps in difficulty with Italian ways or unsatisfied by low margins, but also for idealism. They were still fond of the old range of Swedish bikes and engines and remembering the magnificent work, done over the years by the Swedish company

The Husqvarna 510 -1988 "Argentina", kept as "street" use. (source www)



(... blowing up the budget, as I explained at the beginning). Thus, in early 1989 only a few dozen of TX 1989-A arrived in North America and Cagiva had to redeploy the sales network.

It was foreseen in 1990, with a big drumbeat, the launch in the USA for the WXE-WMX model, actually the 1989-B that we will explain below, only adapted to the US regulations. Lukewarm reception, as expected, but the following year Americans forgave Cagiva when arrived the "610", a 577 cc big bison to tame in infinite grasslands, endless forests and wide desert lands, superseding in the skill the old model "mixed", that's the TX. The 610 was advertised in an awesome way by Belgian cross champion Jacky Martens.

Let's go back to Varese, by the Lake namesake, to the commute between Schiranna and Biandronno factories.

At the beginning of 1989, while the commercial offices were busy to dispose of all Swedish "ironmongery" in the market, the technical department aged to start the production of the "1989-

B", the "first Italian Husky, with Swedish blood", which will see the sunlight behind the storefronts glasses only during middle spring. (REF. 2)

Let's summarize the retrospective. The Husqvarnas 510 "1989" ended up being three: the "1989-A", also called "Italian 1988" as described above, the "1989-B" or "True 1989" that had its commercial cycle in Europe up to March 1990, finally the american "510-1990", WMX cross and WXE enduro models. Then, only to complicate the summary, there were bunches of late 1988 bikes registered in early 1989 year.

It must be said, to set the younger readers, that the world markets of that time were rather closed. It was laborious to import a motorcycle from Sweden or from Great Britain. Just imagine exporting them to the Americas. We also have to remember that in Europe there was at the time the political and trading wall with the socialist Countries of the East, fallen but only formally in November of that 1989.

Well, the "Five-Ten" was planned as a major commercial operation worldwide, but not everywhere. In 1989 the 510 models and bikes sold by Cagiva got in way their destinies in tracks and races of two continents only, North America and Western Europe (Northern Europe, France and West Germany in prevalence, but also in faraway Australia), because were there at

that time the business areas of both Husqvarna and Cagiva companies.

## IMAGES OF SURVIVORS HOW THEY ARE

Thirty years are not so few, especially compared to the bad life of a dirtbike.

Today it can sometimes happen to find a 510 of Italian-Swedish era, to some historical motorcycle show or convention. Decimations aside, the 510 was already a motorcycle not very common, cause its kind of professional use and a temper not easy.

Competition bikes, as we know, destined for dire battles and then - if the owner was charitable - carried up to the eternal rest in the Elysian Fields, warehouses or barns.

To quickly recognize the 510 made in Italy, the "1989-A" and "1989-B", we must look at the steering tube and to notice if the VIN code (Vehicle Identification Number) is punched on an oblong plate applied with welding. This kind of plate belongs to all Italian motorcycles and distinguishes the Husqvarnas made by Cagiva, starting from 1989. The "elephant", that is Castiglioni company logo, also appears on the engine cases (only on the "B" model, serial engine). As known, the VIN codes are to uniquely identify the year, the

510TC 1989-B, prepared with head water pump. (L. Perry)





The "US Sister" WXE 510-199Q Specific the square frontlight, the attenuators to the silencers, some items at the handlebars. (G. Pennington)

model and the vehicle, according to rules laid down by the Company's registration offices and, for the legalization, by the Government Motor-Vehicles Department.

It is interesting to note the difference, with Swedish era coding. For 1988 the VIN is a "speaking" code, that more or less it explicitly reports in alphanumeric "name, model, year, number" of that one vehicle (eg ZHU510TE ....). For legal purposes (enduro bikes) and in order to export, a light plate was riveted with the Type-test or typing code, runned in 1983 in France on the prototype bike. Instead for the domestic market there was no need of anything else.

The later Italian coding, in other way, uses a factory registration file (eg 7T 000012) and for the enduro use a separate legalization code was been added by the General Motorization Direction (DGM) of Rome (for the "Husqvarna 510 machine" it was DGM52544OM). There were also other adhesive

labels with notices for Europe market, the USA or the Australian one.

There is no valid reason why the owners exhibit to anyone the VIN of the frames, so the only way to recognize a model is almost always an evaluation of sort of pictures and a few words about the bike witnessed by the people.

A very difficult task is to recognize and evaluate truth and authenticity of a motorcycle. Possible, however, is try to identify some particular components; above all relying on a good deal of experience on these one machines, in order to identify main changes and whatever life they had.

Taking as a sample, two old Huskies 510 1988 and 1989-A, they end up being totally indistinguishable, willing the hope in some discriminating, traces of the graphics, or some components of Italian new wave, such as the frontlight mask. But only an experience judgment give an help, in fact, on the 1988 model mostly, the engine heads

paint come today stripped a bit and the exhaust pipes threw a lot of rust.

The 1989-B model can be instead easily recognized, cause on the enduro frame has a specific protection for the water pump; on the cross frame this item is missing, but other details come to help us, like on the swingarm, for example. In 1989-B there are then specific features on the supply of components;



also other kind of signs left by its lifetime can be glimpsed, that those who owned the bike intercept on the fly.

Finally, the USA 1990 model, caught in the act cause the domicile for sure, has specific components such as square light, kind of levers, silencing mufflers and upgraded spark arrestors.

Unfortunately, disposals, neglect and many ownerships (till over 10 sometimes, practically as a sort of cashier's check, fact that is no so weird for the oldtimer Husqvarnas business), as well

A model WXE restored, refurbished and modified. Undetectable sample among survivors. (source www)

as fanciful transformations, have finally returned an infinite quantity of situations and set ups, which led me to split up the exhibits by means of a ranking, simple minded, but I would say effective for a guidance.

- Perfect. Bikes extremely rare, fascinating and truly authoritative. They are the healthy machines, in use, still legal.

- Excellent. They are a kind almost complete bikes, without superficial parts (plastics, mudguards, lights, ..), broken and / or without papers, anyway easily recoverable as a stock machine. Alas, the beautiful Bosch glass frontlight, its mask, the rear fender are very difficult items to find today.

- Good. There aren't all the peculiar parts of the Husky 1989-B model. Usually the bike we found is broken or near to being it and it requires complex mechanical and both aesthetic and functional rebuildings, anyway possible for an expert.

- Sufficient and not. So many situations of 510 widely retrofitted and fully functional, but wearing parts of the following or previous years model (or other brand's parts), that is really lacking in parts if compared to the original: are they so called "chimeras" and to extremes, the "harlequins".

Typical of the designer garagist, that is home mechanic skilled, are the changes coming from technical suggestions of the later 1990 bike, or the increase in displacement, from 503 cc, to

540 and up to the classic 577 cc with a power pack of 610 model. Then, replacement of the rear fender, for a more streamlined, the Acerbis type or for the mx one, with a tail cutting. Upgrading of the rear drum barke, swapped with a disc brake, by mean of captious work of adaptations. The White Power fork or other brand upside-down type, instead of the Marzocchi standard issue. Removing of the rear WP mono to bring back home an homesick Swedish Holins. Still, an ingenious new recirculation pump, spinning now on the camshaft axis, as will be serial from 1990 onwards.

Speaking of nationalism and nostalgia, it is possible to see some of the 510 "Varese natives" now repainted, rearranging them by the standard white-blue to the yellow-blue fantasy of the Swedish flag: they even can receive - without any kind of technical problems - an engine coming from its little cousin, the Husaberg. (REF. 3)

A nod to the cases of 510s refurbished, let me say "restored", on which deep meaning we return to the end. In general, the repainted and then refurbished bike is worthy to suspect and deserves little more than a passing grade. These operations are frequently only for profit, wishful thinking, unrealistic projects, which hide ugly flaws, errors, items not really stock and even neither belonging to the bike of the time.

Personal opinion ... it was better to leave them rusty and broken as they were. The best state of use is the sincere one, when you see brush strokes, scratches, patches, adhesive tapes, rivets and bolts as needs. These are situations that allow a true reading of the machine and its real life.

### THE RARITY OF THE HUSKY 510 1989-B

For a survey of the existing vehicle fleet, the use of Internet and Social Networks has been paramount.

For about two years, from 2016 to 2018, I very closely went through the network, collecting from the "worldwide" web sites any reference to the bike: sales ads, quotations, technical chats, exhibitions, gatherings, personal blogs, videos of many kinds.

On the one hand I collected references, that are statements of "existences", which cannot be judged and are valid as loose statistics. There is indeed an unexpected population of vehicles, but also a number of vehicles are expected be disappeared, as there are many evidences of "naked frames". On the other, the prevailing part of the sampling amount came from images and video, in which the bikes lend themselves to a visual evaluation.

Basically, in over 18 months, I succeed in collecting the quantity

of 93 machines, under various conditions, but worthy of representing the two 510 models 1989-B and USA-1990. Alongside, about 14 samples of model 1989-A have come to light, on which there is some uncertainty in identify, as explained above.

Certainly this is not a scientific statistic, but only an orientation, which seems to be confirmed by opinions of specialists of the Swedes 510 bikes.

In the entire vintage population of the 510, the "aircooled" models, 1983-1986, are mainly represented (are there many "fakes" among them, and I gloss over them now, to not become argumentative).

The three "watercooled" models then follow by quantity, among which precisely the minority is the "1989 year" group.

Internet doesn't give real statistics, however we can follow the feeling that moves the opinions and referentiality on the 510 "Italian" (...there are, someone maybe ...I saw one years ago ...once at a vintage gathering ...saw one at a gas

station ...) and I could hazard a discrete rarity judgment.

The quite untraceable quantity of the 1989-B model, today, is not depending on technical features, but on the goings-on during its early years of life:

- the 510 of 1989 was seen as a "transitional" motorcycle, with skepticism and a bit of prejudice: a "Pizza-Husky", "steel for pots" and other funny attributes, mainly in the USA, where Cagiva brand did not receive at the moment great attractiveness.

- new styling feature. The double left exhaust collected in pair terminated the line of the classic Swedish bike.

- diversion and racking up expectations of public and dealers towards the forthcoming 510 of 1990, fully updated.

- subsequent appearance of the 610 model in 1991, a big sized bore, in my opinion a bit overrated.

- the new bike fashion, the "motard". Many 510, put on the sidelines still fresh and well working, were adapted to competitions on pavement road, with certain doom: breaking of the

engine, then subsequent dismemberment.

- the "legal street" way, just to make sense of the road tax. The weak point of the Husqvarna engine, missing oil pump, was from the beginning the poor lubrication of the crank, a wearing cause during low and continuous regimes.

- The 510 engine was also used in the early 1990 and following years for a new class road racing, the Supermono, by adapting the engine on standard chassis.

Then there were the flaws, of course. Like all 510 bikes, enormous need for maintenance and loving attention on it, of which I personally could make an infinite list. Critical in the 1989 were the rocker arms, defective by moulding, and similarly the internal mechanisms of the kickstart. Some other not good stuff.

Finally, due to a too fast assembly at the factory, there were bolts that flying away, with predictable damages like a Russian roulette. These are unforgivable things for the Client, who swoearing revenge against

PRODUZIONE CAGIVA 510-1989 vs ESISTENZE DOPO 30 ANNI				
89A TE	7T000001 - 7T000400	===	400	12
89A TC	9T000001 - 9T000050	===	50	1
89A TX	ZHUTX510V00001 - 50	===	50	1
			tot 500 pz 89A	14
89B TE	7T000405 - 7T001204	===	800	59
89B TC	9T000053 - 9T000352	===	200	19
89B WXE-90	ZHUTES10LV000005 - 204	===	200	11
89B WMX-90	ZHUTC510LV000005 - 84	===	80	4
			tot 1280 pz 89B	93
			Germania	17
			Regno Unito	15
			USA	14
			Francia	13
			Svezia	10
			Italia	8
			Australia	5
			Austria	3
			Danimarca	2
			Belgio	2
			Canada	1
			Bulgaria	1
			Finlandia	1
			Spagna	1

VINs of 510 produced in 1989 year and quantity of survivors intercepted on www. An actual survival of 250-300 is hypothesized.

510TE in Mallorca (Spain). It belonged to a bunch sold in 1990, among the last ones. (Y. Berenguel)



the brand, but impotent, used to take revenge on the unfortunate motorcycle. So many of the 510 become out of Schiranna plant went quickly to the scrap metalyard, or on go-karts under hands of kids curious of mechanics.

Speaking of merits, the 510 1989-B is a turning point between the Sweden phase, which had in itself still several experimental features, and the Italy phase, in which Cagiva introduced improvements and extraordinary innovations also in the engine, bringing it to planetary success.

In particular the 1989-B ... you're welcome! had loosed the strong and famous hot starting problem of the Swedish 510. It was so bad that 510s bikes honour were badly sullied, after the introduction of the single shock, for "aircooled" bike 1985-86 and the "watercooled" of the two following years; in this models the airbox wasn't beautiful large

and central as in the old 1983-84 machines, but smaller and on the side.

It happened that if engine shut off, the right exhaust overheated the box air filter (put on there with little wisdom from the Swedes). The carburation was altered for at least ten minutes. For this reason, as mentioned above, in the 1989-B model the exhaust system was collected all the way to the left side, then a wider airbox was installed.

Here also a misstep of Cagiva: the double silencer ordered to Lafranconi, was fragile as a biscuit, too long, badly aligned on the frame and few efficient at the sound level meter. In short, every winter its parts had to be patiently sewn together.

This investigation of my 1989-B has been severe, but objective, in fact it was and still is my hobby bike.

About the 510 "Italian", today we mean as vintage machine. This bike deserves real respects from

collectors, as the "last EVO Sweden" and "progenitor of the today's thumpers era".

These are words that really give the machine the right perspective. Here it should be said, in fact, that his heir, 1990 model, receives much less appreciation.

In short, a bit of repent from the vintage market, that recognizes the historical and technical importance of the 1989-B model, as the right compromise between Swedish effectiveness and aesthetic clean-ups thanks to Italian hand. Not only that, even the bike performance and the achievement of a driving attitude that leaves little criticism even today.

## RESTORE OR REBUILD?

It would be repetitive to exhibit the whole dossier with so many adventurous lives, peering in the images I collected, of the many Huskies 1989-B. That's could be like they were in classroom reunion, or better, a big litter's sisters at the thirtieth birthday party: there is the one redone in pink, for the future champion daughter, there is the black-chrome motard style, an hand crafted sidecar, many amazing harlequins as coming from alms, and so on.

However, my perspective, looking at the pictures was intuitive and substantial: asking myself if, how much and how



that 510 could be brought back to an "ex-factory" condition.

At this point a new chapter could be opened, the choice on the method: rebuild or restore?

There are two schools of thought.

In USA, it goes so much the vintage "Rebuilt", normally without exceptions, that's "I want everything as new". In that way, we pay no attention to the "Restoration" otherwise told as "keeping in state of use".

This above is instead the trend in Europe and especially in Italy; that's a discipline, requiring a scientific approach, and sometimes can even become a restoration philological (identify and maintain the stock parts) and historical (keep the past life). Well, let me say that the off-road motorbikes doesn't deserve always so high level of attention, to refresh them.

However, something deep touches anyone if surveys a motorcycle not putted on make up, but with all its wrinkles.

I remember, in a motorcycle rally in Austria, there was opening its way between rows of curious, with its own metal growl, a 510TE of 1983. It was in perfect condition, so many years on his neck, worn seat, yellowed plastics, peeled handles, scratches and rust, oil cooked smell. There was talk about 8200 euros, without surprising anyone. The price is right? Half maybe yes, anyway if that old boy breaks down you have to fix it,

and go back with the starting matter and the reasoning.

I'd like to conclude. I won't never buy the emotions repainted by others, for me there is only one bike that I like: it is the ironhorse one that lives in my garage, that I know until the last bolt.

It's the one I'll be honored to spend money on, to keep it tidy day by day.

About my Husky 510, "vintage" is an empty word.

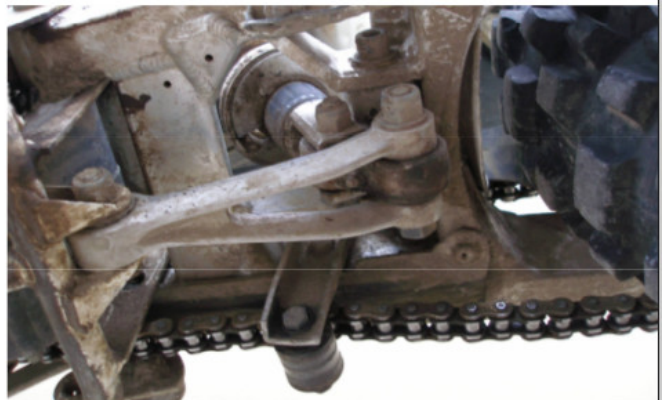
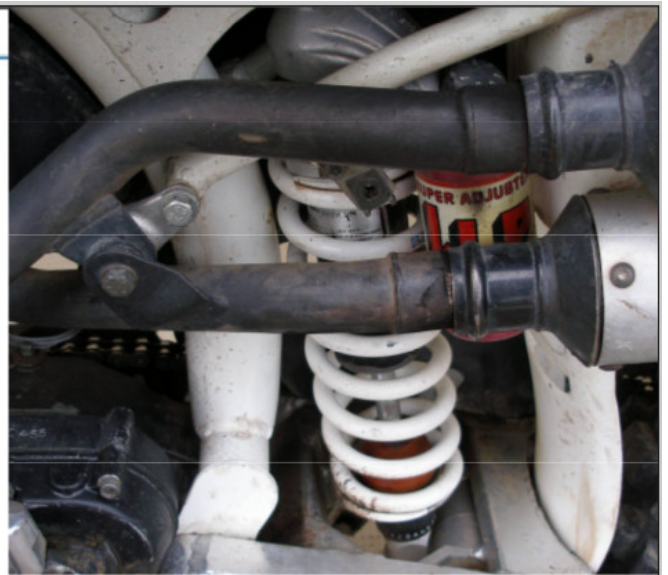
Written by Luca Pellegrini

#### Credits to informers

Ariel Castignani (Argentina)  
Dries ter Hennepe (Holland)  
Ben Van Erp (Holland)  
Roy Moline (USA)  
Niklas Petterson (Sweden)  
Heinrich Hempel (Germany)  
Tobi Knatterton (Germany)  
Steve Wildman (England)  
James Harrington (Australia)  
Steve Sept (Canada)

#### Articles, magazines, books

- \* Motocross Action, December 1982, "Odeshog, Sweden. Husky four stroke"
- \* Dirt Bike Rider, October 1984, "Husqvarna Simple Minds".
- \* Cycle World, October 1986, "Absolutely the lightest and best dirt thumper. Husqvarna 510 TX"
- \* American Motorcyclist, September 1987, "Inside Cagiva".
- \* Motociclismo, March 1988. "Husqvarna TE510-1988 trial".
- \* Motocross, March 1989. "Husqvarna 510 TE".
- \* Dirt Bike, August 1990. "Thumper Thunder Shootout".
- \* "Husqvarna Success", G. Lindstrom, Parker House, 2010



Rear shock linkage system.  
The single doubled rod was  
introduced in the 1988 model.

Monoshock White Power  
with double side regulation.



Frontlight mask is a mold of the "Cagiva Elefant" one.  
CEV Odometer. CEV Pushbuttons. Magura levers.

Carburator Dell'Orto 40 generous, and the 2in 2of Lafranconi, 50cm long. the muffler was held in double to contain the side encumbrance. In the TC model it was 20 cm shorter.



Picture above:  
Increased side filter box.  
The side handles, here selfmade, were introduced from 1990  
Marzocchi fork. Front brake disk Brembo.  
Drum brake rear, swedish classic line.  
Nordisk rims.



SEM ignition system, from 1988. The brake light cable is connected to the pedal slot.



Picture right.  
The automatic decompressor at the kickstart.



The monotube frame with cradle is under Swedish tradition. The cradle closes as a ring only starting from water cooled models. Selfmade protection to the flywheel case.



# AT THE WORKSHOP AND DEALERS THEY TOLD...

## FURTHER INFOS ABOUT THE HUSKY STORY

(REF. 1) The Castiglioni-CGV company dates back to 1960, founded by the "old master" Giovanni Castiglioni. It produced and still produces bolts and small parts for leather goods and clothing (buckles, studs, buttonholes). In 1978 Castiglioni family bought the Aermacchi plant in Varese-Schiranna, an historic Italian manufacturer of motorbikes and then founded the Cagiva brand. Thus started the adventure on the worldwide motorcycling markets of that time. In fact, AMF-Aermacchi had been a subsidiary of American Harley Davidson for several years. In 1985 Claudio and Gianfranco Castiglioni brothers acquired the Ducati Meccanica in Bologna, a jewel sold off by Government Holdings, thus entering the Olympus of motorsport and engine technology. The Commercial Holding of Cagiva Group was established, with headquarters at Ducati plant, Borgo Panigale.

The acquisition of the Swedish Husqvarna, accomplished starting 1989, took place only in terms of know-how and brand. It should be here remembered: several models of Husqvarna

bikes coming from the Italian era were later welcomed in the Swedish Museum.

Many people have wondered, really, why the Swedish pride has yielded, letting go the Husqvarnas to Italians and not to other buyers in Northern Europe or why not in the USA.

There was going on the "Affaire Zanussi", behind the scenes. This is what were told about. In the years 1984-1987 there was the big deal and merging operation "Electrolux-Zanussi", household appliances, in Italian plants in Veneto and Friuli Venezia Giulia. The Husqvarna motorbike business was negotiated with Electrolux as an exchange item, to swap favours one each-other. It was an agreement between politicians and for benefit of the Castiglioni and Cagiva, because they were the handler of the moment, after the jackpot of Ducati Meccanica.

(REF. 2) Fabrizio Carcano, Cagiva's test driver and a 510 rider, tells us: "The Swedish bike was already a great product, and in fall 1988, at the Experience Department, we set up the competition bike for following season 1989, that was only based on the upside-down WP forks, 400WR airbox and keeping both exhaust pipes on the left: this was in short the 1989-B model. The frame was really calibrated to the weight of the engine, the bike had a memorable stability in speeding up, braking, drifting, only slow in slalom and bending, but without competitors anyway.

The engine was at the top - we all knew it was delicate - and had a displacement perfect for competitions and especially for the generic needs of fun runners. The later models were not as versatile, being tailored for specific categories: the 610 for the MX, the 350 for the little enduro. The main variation of my "race official" TE 510 was the 5-speed transmission picked up from the MX-cross engine".

This witness allows me to clarify a historical opinion over the two 1989 models "A" and "B". Behind

the 510 1989-B there was a planning and a set of tests and evaluations, as use to happen for all the years, for every kind of bike. Just to contradict the "blah-blah" among husqvarnist people, it was instead the 1989-A model that was the true transitional machine Sweden-Italy. It can't be even defined as "model", but a product of opportunity, without evolution, a tasteless assembly of nordic parts on a frame with a serial number stated by Rome. Twist of fate, the "A" model - in nice conditions - is really rare.

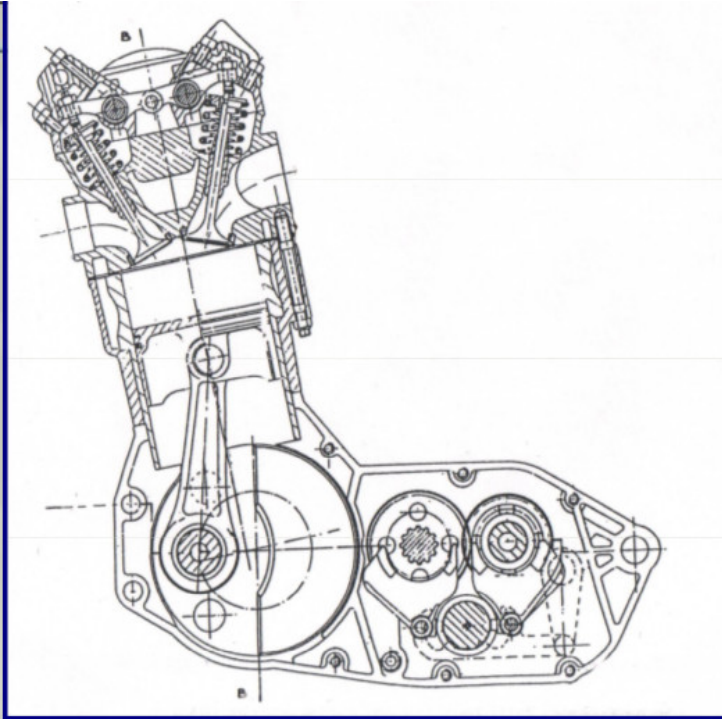
(REF. 3) The Husaberg Motor AB was established in January 1988 by the group of Husqvarna technicians who had invented and designed the engine of the 510 (Thomas Gustavsson rider and "mind", Ruben Helmin engineer, Urban Larsson designer, Bjorn Elwin experimentation) and a local entrepreneur of mechanical machining. Difficult to know the real reasons behind the founding of this new company. At the time, among insiders, rumor mills told a disagreement reaction, due to the treatment from Cagiva's top management. However, personal events aside, there was certainty in the future of the big thumper's

engine in the sectors Cross-mx, Enduro and Motard. During 1988, 3 prototypes were submitted for the launch of the "Husaberg FE 501", a very state-of-art modern bike, designed with the strong standards that inspired the 510 during Husqvarna years from its origins: rationality, reliability and inventiveness. In 1989 year only 96 vehicles came out from production line at an exorbitant price, for loyalists. The Company will be successful, but maintained financial autonomy until 1995 only.

Races season 1989  
Cagiva starts to belong  
to the 4-strokes with the  
510 1989-B  
(F. Carcano)



24 PROVA CAMPIONATO  
EUROPEO ENDURO  
MAGGIO  
MAGGIORATO 19/20/21 MAGGIO 1989  
MOTO CLUB COLLINA MOTORI



The main section of the Husqvarna engine (model 510/610/350). It was designed in 1982, fitted on the standard case, using an experimental cylinder and a Honda cylinder head. The archetype is exposed at the company museum in Sweden. It was not an easy project startup: big overheating at first, and really many vibrations. Between 1983 and 1984 engine had two sizes, 490 cc for the cross and 503 cc for the enduro one. In 1985-86 displacement was unified in 503, with some upgrading to the case shells and strengthening of the connecting rod big eye. Gustavsson, however, since 1984 already used to race with an Liquid Cooled engine longer ahead of its time.

The engine itself does not contain deep secrets, it's an ingenious adaptation of the four-stroke mechanisms, on the base of the two-stroke 430/500, to save costs. As a consequence of

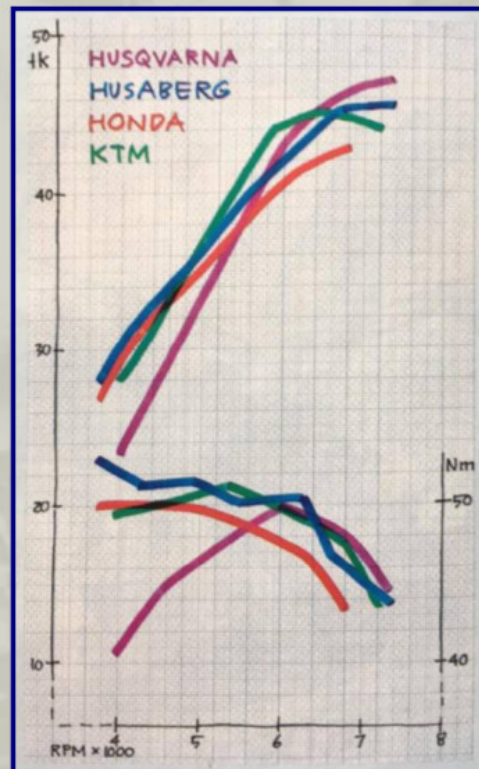
this "bizarre" choice, the countershaft balancing system was absent (in order to cut-off of the so-called secondary frequencies): this problem was been fixed, with a smart solution, increasing the flywheel masses and then with a piston minimum sized starting from 1987. So finally, a kind of satisfactory results were obtained to cut the handlebar vibrations.

The oil pump for the power pack neither is present: lubrication takes place by means of oil mist (RAL System).

Gearbox was serial production, indestructible: 4 gears for the cross model 83/84, 5 since 1985; 6 gears for the enduro one.

The engine case was guaranteed by the ten-year evolution of the Husqvarna engines. This allowed, in the Cagiva era, to indulge at will on the original power group, with variations of bore (91.5mm, then 98mm in "610", 84mm for "350") and stroke (76.5mm, reduced to

63mm for "350"). But the main research effort took place on the head, where the world stood still at 1982 year: compression ratio to increase (10:1, then 10.2:1 on 350 and 610), wider valves diameter, then new upgrades for the camshaft profiles. By mean the only upsizing in the clutch package, everything was possible. Out from the "610" of Martens was also squeezed something like the impossible (it was a 640 cc), but only for the short racing times.



The graphic shows a comparison of torque curves (basic, to the shaft) and primary power (to the shaft), among the big thumpers dirtbikes in 1989, picked up from bibliographic sources. For the Husqvarna sample, it is the standard 503 cc engine, on the

TE model. The exhaust system is very influential: the engine on the TC give something more, with its shorter and more open mufflers, the TE 1990 instead is more silenced and gave almost 10% less performance. Pay attention that these 4 thumpers years 1988-89 have a different displacement.

On the finished bikes torque measures tests are conducted at "the wheel", the simplest way to implement and more intuitive to the public; between on shaft measures and on wheel measures, for both torque and power, however there is evident difference in values, but also as a concept. We spend now some words.

The torque at the shaft is the main requirement of the engine, the goal of Design Department. Its value is litmus paper, because it expresses the specific performance of the power pack only.

The developed torque is plotted, measuring it as the engine revs change; the dynamometric brake is connected to the shaft, or to the sprocket, taking in account the transmission rate. For the 510's engine the tests give 53 Nm as the maximum value.

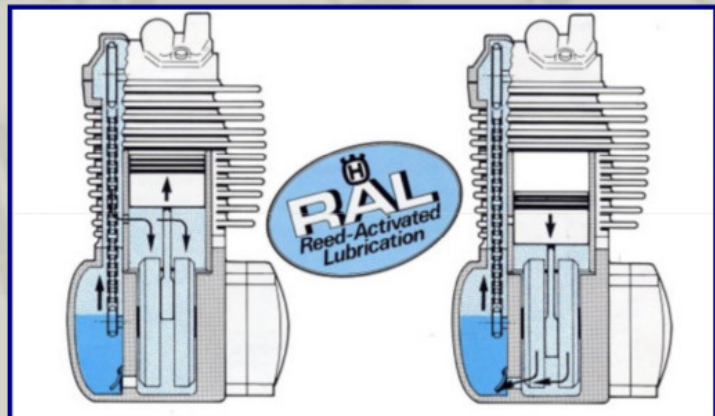
The torque to the wheel that's driving torque, however, becomes arising from the multiplying the total of the transmission line, that is primary gears rate, gearbox, chain rate. The pushing force finally follows

from the wheel radius measure. Calculations are easy. Estimated the torque generated to the sprocket, with crown-pinion 48/14, in the first gear the 510 on the ground discharges about 350 Kg of force, that's the maximum, with an effect close to "2G" for the rider; however, the impulsive action of a "blow" after clutch release leads to much higher value (theoretically, double).

Therefore, inserting higher gears the "torque blow" decreases, the bike acquires in power and then the "energy" effect (force + speed) takes over, that in 510 happens between 5500 and 7000 rpm. For all rates growing

(torque to the shaft x rpm). From engine to wheel, the power would not change, but - in the bikes - is actually reduced for about 5-10% by mechanical friction losses and by the inertias of the rotating parts, wheels included. For the 510 at wheel the tests give peak values of 46/47 CV (49-52 CV at the shaft).

However, these power data are not very useful as well as dispersive to understand a bike (even two identical bikes can give different diagrams). A motorcycle is not a plant to develop power, but rather a dynamic reality. Driving a bike, good performance (curves) of



up, the moment of paradise (between peak torque and maximum power) is near two thirds of throttling; after that the couple falls and the bike is no longer reactive.

We need to be experienced riders, to feel both torque and power and exploit them as two different opportunities.

The power curve is obtained as a numerical consequence

torque and power must be nicely overlapped, in response to the gearbox shifting and a throttling turn.

The Husky engine has a very original torque curve, among the 4T of its years, not really different that of a two-stroke, but with markedly increasing values, up to the peak value at 6000 rpm.

In other words, at low rpms the

	ATK 604MXE	HONDA XR600R	HUSABERG MC501	HUSQVARNA 510WMX	KTM 600MXC
Engine type	Air-cooled, 4-valve, SOHC, 4-stroke	Air-cooled, 4-valve, SOHC, 4-stroke	Liquid-cooled, 4-valve, SOHC, 4-stroke	Liquid-cooled, 4-valve, SOHC, 4-stroke	Liquid-cooled, 4-valve, SOHC, 4-stroke
Displacement	562cc	591cc	502cc	503cc	553cc
Bore and stroke	94mmx81mm	97mmx80mm	92mmx75.5mm	91.5mmx76.5mm	95mmx78mm
Carburetion	38mm TMX Mikuni	39mm Keihin	38mm Dellorto	40mm Dellorto	38mm Dellorto
Fuel tank capacity	4.7 gals. (MX 2.3)	2.6 gals.	2.1 gals.	3.2 gals.	2.3 gals.
Running weight w/no fuel	271 lbs.	271 lbs.	247 lbs.	258 lbs.	252 lbs.
Noise output (20" MIC test)	103 dB	95 dB	89 dB	99 dB	92 dB
Gearing	15/50	14/50	15/52	14/48	14/50
Lighting coil	Yes	Yes	Yes	Yes	No
Spark arrester	Yes	Yes	Optional	Yes	Optional
Green sticker legal in stock form	Yes	Yes	Yes, w/optional SA	Yes, w/SA	Yes, w/SA
Wheelbase	58 in. (1473mm)	57.5 in. (1438mm)	58.7 in. (1490mm)	59.5 in. (1512mm)	58.3 in. (1481mm)
Rake/trail	27°/4.8 in.	28°/4.6 in.	26.5°/4.8 in.	26.5°/4.7 in.	27.7°/4.8 in.
Ground clearance	13.5 in. (343mm)	13.2 in. (335mm)	15.3 in. (390mm)	15.1 in. (385mm)	15.2 in. (386mm)
Seat height	37.5 in. (950mm)	37 in. (945mm)	37.4 in. (950mm)	37.5 in. (945mm)	37.8 in. (959mm)

510's engine has moderate towing force despite being a 500 cc, which gives the bike a well-known feeling of progressive driving, or softness at the start and in response to recovering. This is the "merit-defect", that is the basic feature of this singular engine. It comes from the unbalanced inertias of the engine that really "eat" more than a bit of the torque, in the engine regimes that are used.

The RAL system for lubrication. The distribution chain draws into the clutch crankcase, dragging the oil up to the mechanisms of the cylinder head, and at a part of it is atomized. During the motion, the chamber of the distribution chain becomes saturated with oil in particles, a part of which is sucked into the cylinder through an eyelet, equipped with filter and magnet. The leader for this guillotine transfer is the instantaneous depression that in the crankcase occurs, when the piston rises to the upper dead point. The piston then descends, closes the passage and compresses the crank chamber. The increase in pressure lubricates the connecting rod and bearings, opens the reed valve and returns

the excess oil in the clutch housing.

The RAL system is a closed circuit, it goes into fails with the oil plug badly sealed or if there are any openings in the clutch cover. In fact the oil vent originally placed at the side of the clutch casing, behind the kickstarter in 2 strokes engine, had been closed.

The oil must never fall below the draft level, which corresponds to about 900 cc. RAL is effectively activated in engine releases and motorcycle decelerations. It can be criticized only during the low rpms and for the pollution of the oil with sintered powders from the clutch discs. In the engine 1990 it was improved with the addition of an external flexible tube, coming from the crankcase drain plug to the base of the cylinder. Other oil in the crank mechanism is sucked, always due to the internal depression.

Without forgetting merits to this invention, the hole with reed plug was an obligatory in any case, because the engine can not turn otherwise. The pressure must be relieved when the piston going down to the bottom, in fact in the crankcase (it was two-stroke) the crank chamber is sealed, by the

seals.

In the figure above an overall comparison between the main thumpers for motocross in 1989-90, available in the American market (from DirtBike, Thumper thunder shootout, August 1990). Among the "stepsisters" Husqvarna and Husaberg stayed the astonishment of choosing; the only flaw known on the 510 was the length of the wheelbase (1512 mm), which then lacked in the "cornering", the bent in the curve.

The considerations on real management, logistics and costs, certainly don't appear on the price and product flyers, specifications and reviews of any bike. For my ten years experience, I can express myself as an everyday hobbyist and user.

The 510 reach 13-15 km / litre of fuel consumption, that is to say a refuel have to be scheduled after 110 km of enduro. On the motocross racetrack, it asks 3-4 litre / hour. It burns 10 cc of oil per hour, even as old. It does not go too much oil in the case, max 1.5 ltr, otherwise it smokes but mainly slows down the clutch. The ignition timing must be delayed a bit in order to



soften the reply at the throttle. For this purpose it is also possible to reduce the compression ratio (using a 0.5 mm gasket at the base of the cylinder, the compression rate is lowered to 9.5: 1).

Famous is the automatic decompressor, connected to kickstart; it works wonderful (two clicks movements random and go), but cause trivial reasons it was always eliminated. The spark plug must absolutely be the NGKC7E, otherwise the end of the fun is for sure. The engine does not accept a sudden gas opening, blows out and eject the carburetor. In the mountains the engine soon loses carburation. The same in sultry places and if weather turns to rain.

Cold ignition (or so or there is to regulate): 1-2 movements with choke up, down the choke, go, the engine wakes up, lift the choke heating up 15 seconds, down the choke and a big sweeping.

Avoid the rear tires too aggressive: the bike becomes really tiring to drive. Better easy

and more funny with skating a bit, because it has never been a baby bicycle, as instead it was badly talked in workshops: bike is glued to the ground with its 125 kg, effectively on board. In this regard, the optimal crown-pinion ratio stands between 48/52 and 14/15; bigger rates become a nightmare.

Weight / power / ride setting. Very high as standard, the TE must be well adjusted in height; stable and trusting on mud, gravel, uneven soil, ramps, descents at will; middling in stones, in slalom and when there is to handle it. If pavé with wet leaves you can only hope for an excellent tire's rubber.

Meek, smooth and silent like an ox, in the first third of throttle. With right mufflers has its characteristic mechanical sound "hard", weakly nasal, cause of the inlet airbox, combined with the tight ticking of the tappets and the buzz of the clutch bell: no longer the scrap metal of the old "air cooled", but first sample of a new motorbike's kind of sound, that's the "supermono

lament". If we then open the throttle, under torque effort or - if you really need it - for a long boost, bad flurries of gun machine come out of the exhausts pipes. For this reason, were supplied two cannulae to be applied to the exhausts such as silencing caps (today called Db-Killer) and as spark arrestors, in case of road use: the price is a astonishing decline in performance.

Speaking of criticality, for amateur use, the bike lacks protections: the forged Magura levers can be straightened like a miracle (they must be heated by a torch), but a careless side landing puts at risk mufflers, seat and above all, the radiators.

In addition to having quite a temper, the 510 asks you assiduous surveillance, unlike the massive Japanese peers. On the basis of expense and other records, adding the purchase and then spare parts, maintenance, repairs, tires, oil and gasoline, legal costs, the 510 was a wallet motorbike. Bringing everything to denominator year after year (without the man-hours) I can certify that one hour of fun is between 40 and 50 euros: ... at the end of the show you have to pay the ticket.

L. P.



Cari lettori,

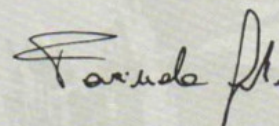
quando sfoglierete queste pagine, anche le feste di fine anno ce le saremo ormai lasciate alle spalle, per cui apriamo la stagione 2019 con questo nuovo numero, dove troverete i resoconti delle ultimissime manifestazioni del 2018 ed alcuni interessanti modelli, mentre il personaggio che vi proponiamo questo mese è un campione della gloriosa Regolarità: Luigi Gorini.

Dando uno sguardo al recente passato, ci siamo occupati dell'evento di Imola, che ha celebrato il settantesimo anniversario della prima gara internazionale di motocross disputata in Italia, le immagini relative alla Mostra Scambio di Novegro e le manifestazioni svoltesi a Camaione e Montagnana.

Tra le moto proposte, ve ne sono due praticamente allestite artigianalmente intorno ad un motore di serie: la Honda TL 125 Sammy Miller Hy-Boy e la Moto Farinelli 50 cc., l'ultima Gori da Regolarità: la 125 G81 MR, la Husqvarna 510 "B" del 1989 con la sua lunga e dettagliata storia ed infine il TGM 50 C del 1975.

Chiudono la rivista le rubriche Amarcord, dove ritorna "Il mio motocross" di Guido Laurenti e quella riservata al modellismo, in cui si potranno ammirare i modellini che la Polistil proponeva in versione cross.

Buona lettura a tutti.



Dear readers,

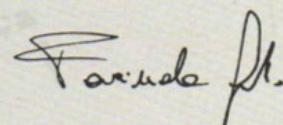
when you flip through these pages, even the end of the year we will have left behind, so we open the 2019 season with this new issue, where you will find reports of the latest events of 2018 and some interesting models, while the character that we propose this month is a champion of the glorious Regularity: Luigi Gorini.

Taking a look at the recent past, we took care of the event in Imola, which celebrated the seventieth anniversary of the first international motocross competition held in Italy, the images related to the Novegro Exhibition Exchange and the events held in Camaione and Montagnana.

Among the proposed motorcycles, there are two practically handcrafted around a standard engine: the Honda TL 125 Sammy Miller Hy-Boy and the Moto Farinelli 50 cc., The last Gori from Regularity: the 125 G81 MR, the Husqvarna 510 "B" of 1989 with its long and detailed history and finally the TGM 50 C of 1975.

The magazine, Amarcord, closes the magazine, where "Il mio motocross" by Guido Laurenti returns and the one reserved for modeling, where you can admire the models that Polistil proposed in a cross version.

Good reading to everyone.





IN COPERTINA  
**Luigi Gorini**

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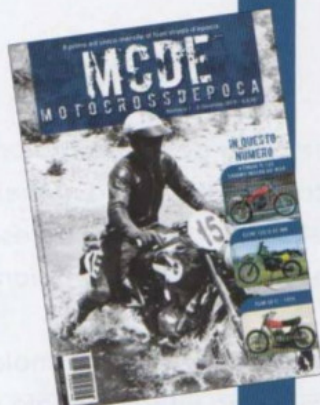
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