



Photo 1 - Derived from the "NOTIZIARIO AEROMODELLISTICO" del 1° August 1945



Photo 2 - From the "NOTIZIARIO AEROMODELLISTICO" N° 24 - July 1946 page 7



Photo 3 - From the "NOTIZIARIO AEROMODELLISTICO" July 1946

ELIA 6 ENGINE and it's " Replica" May 2010.

Foreword

In 1993, after the "Replica" of the Movo D2, the desire to relive this wonderful experience of remaking vintage Italian engines, which brought me back years, was rekindled thinking about the engines produced by ELIA.

The reason for the choice of engines built by Elia Alberto is that I had had the opportunity to appreciate not only its design, but also its performance. And so, in 1993 I decided to continue, starting with the SUPER ELIA 4.15cc, an engine of exceptional performance that started with ease, and thinking about dedicating myself, at a later date, to the 6 cc ELIA 6, the replica of which was realised with the help of my friend Marino Vavassori and of which the first examples were presented at the memorial for Amato Prati held in Modena (Italy) last April 2010.

However my interest in the these engines ran much deeper, leading me to better know this Elia personality who had always been only a name for me.

Through various stories full of memories and details this person was reanimated. Stories provided by those who had seen him emerge as an engine builder and who had assisted him during the development of the series i.e., Eraldo Padovano, both on behalf of Giacomo Mauro, who with his consistently well documented archive is always ready to support, and Carlo Gazzola who for years has been collecting, with personal involvement, anything and everything that may serve as a future memory of our motoring ambitions and, from these stories emerged the profile of an enthusiastic and genial precursor in the Italian Dynamic Model Making of the time.

I thank these people for the valid help given in the drafting of this remembrance.

The beautiful photographs N° 1, 2 and 3 come from "NOTIZIARIO AEROMODELLISTICO", an interesting magazine that was printed in Turin for about a year between 1945 and 1946.

The most beautiful photo is the one from the cover of the 1st of August 1945 edition which shows Elia holding Mario Marsaglia's Saturn model with the Helium MB6 produced by Emilio Fragonara, demonstrating that he was somebody willing to help out even the competition.

Pictures 2 and 3 respectively, show him intently fine-tuning what I believe to be an ELIA Titano, mounted on a model with high wings that is clearly from the Torino school and, in the middle of launching his model equipped with the ELIA Titano.

Photo 4, shows the nineteen old man Eraldo Padovano with his winner model air kraft.

Photo 5 shows Alberto Elia (at left) starting the ELIA 6 of De Filippis' U-Control (in the middle) and Padovano (at right).

Elia was an "Old School" (obviously not in age) model aircraft maker who used to go to the Airtalia field in Torino.

At the end of 1944, he left Microtecnica in Torino, a company that made precision instruments destined for the aeronautic sector and, at the same time for the construction of Hammond, the first electronic organs, the testing of which he looked after. For a short time he seems to have also had collaborative contact with MOTO LAVERDA, a company from Breganze (Vicenza) known throughout the world in the motorcycle field and active from 1949 to 2006, to then start working for himself, founding a small workshop in Corso Raffaello 20, Torino, and, as the expert founder and great mechanic he set himself to mass-produce the engine which he had previously built, i.e. the ELIA, an engine that was far more innovative that would seem at first glance. This initiative was encouraged by engineer Mario De Benedetti from the silk textile industry, and founder of the Model Aircraft Maker Group AGO (Gruppo Aeromodellistico AGO).





Photo 4: The nineteen old man Eraldo Padovano is contemplating his winner model air craft.



Photo 5: Shows Alberto Elia starting the ELIA 6 engine of De Filippis's U-Control (in the middle) and Padovano (at right).

Only after did he make an agreement with Domenico Conte, known as "Franco" and owner of the Aeropiccola company of Torino for the exclusive commercialisation of his engines, which seemed to have taken off successfully from 1946 with the ELIA Titano (4.15cc) photo 6, which he followed with equal success in 1947 with the Super ELIA (4.15cc) and the Super ELIA/E (4.5cc), photo 7, which were produced until 1950.

The ELIA 6 (6cc), photo 8, and the ELIA 10 (10cc) Spark, photo 9, arrived in 1948 but the latter, despite some poster advertising, was never commercialised.

The ELIA 6 was put into commercial production starting from May of the same year in diesel and spark versions. It had numerous strong points; on top of the use of cross Williers' transfer ports and rear in let through rotating disk valves with ample opening permitting excellent and rapid operation, there was also the fact that the engine was sold not only in the diesel version (AUT) and the spark version (BENZ) but also in Dual Version (D.V.) an exceptional advance for the Italian scene of that time. We can say that the ELIA 6 was, for a long time, the ultimate engine of that capacity to be produced as a spark engine in a country where, at that time, had unconditionally adopted the glow ignition.

Only after the separation from Aeropiccola, settled between 1949 and 1950 did Elia announce the direct sale of his production and not only the glow versions of the ELIA 6 and ELIA 10 but also of the SUPER ELIA, see poster. This was the last advertising presence for the Elia engines before the cessation of his activity, thought to be due to the inadequate economic return, making him decide to return to his old profession of production manager for a company from Stradella that produced cast iron boilers. *A crying shame!*

At the time the standard capacities of the engines for U-Control competition were equal to 3, 6 and 10cc.

Elia was missing the 3cc, which he created in just a short time with his usual enthusiasm, equipping it with a rear mounted inlet rotary disk valve, the operation of which, compared with the OSAM GB 18 engine (Bologna Italy), thrilled both Elia and Padovano, who were certain that the motor would have had great commercial success. At this time Elia started the procedure necessary to mass-produce; designs, orders with suppliers for casting, ground and lapped cylinders and everything and anything necessary for such an operation. A considerable undertaking with a significant cash investment.

On the occasion of the competition held in Forte dei Marmi (Versilia) in Spring of 1948, Padovano, to whom Elia had given a present of an ELIA 6 Diesel engine, took part with one of his class B, U-Control models with very short landing gear sticking out from the body and the ELIA 6 reverse mounted; he won with 175kph. The model, photo 4 (where the nineteen old man Eraldo Padovano, is contemplating his model aircraft) was piloted by Elia himself whilst Padovano, who had experience with engine trials dealing with his engines in Elia's workshop, tuned.

The same success, however, was not reached at the National Competitions held in Rome in the Autumn of 1948. Franco Conte took part in the competition with the model called Golia, the design of which was published in one of the first editions of ALA in 1948, with the ELIA 6 straight mounted, and maybe, believing himself to be better than his collaborators, personally piloted the model: the result was not repeated, coming second behind Ninetto Ridenti, doing only 142kph. The length of the cables was in accordance with the rules.

At that time, however, the FAI had ruled that the reference capacities had to be 2.5, 5 and 10cc and no longer 3, 6 and 10. All that work put in place for the production of the 3cc was to be redone together with the costs sustained: this was the general dejection that brought Elia to close his company, bearing in mind the one-sided contract existing with Aeropiccola which lasted until 1950. He would have needed a more forward-looking partner willing to make a cash investment and able, principally, to evaluate and appreciate the simple mechanical genius Elia Alberto.

He passed on, still young, at the age of 62.

A couple of words about the ELIA 10cc spark 1947-48, see photo 9, which again bears witness to the ability of Elia Alberto, which in more forward-looking commercial hands would have continued its success. In A. Losappio-L'Ala's "Motoristica Italiana" of January 1948, on page 18, the following testimony was reported:

-We can attest to having seen, with our own eyes during a visit to the Aeropiccola engines of Torino section together with the latest auto ignition prototypes, the first super compressed 10cc with electric ignition very recently designed and from the work of the noted Elia. Even before we heard it or saw it in action, we had the howling and piercing of the Mc Coy of Tacchella who had amazed us in Florence in our ears, we knew the characteristics backwards and

ELIA

Sells directly his engines:

10 cc — Engine equipped with: glow plug, piston rings, rotating disc valve, bearings Lire 12,000.

6cc — Engine equipped with: glow plug, rotating disc valve, bearings Lire 7,600.

4.5cc — Very simple diesel engine for everyone Lire 4,400.

Contact:

ELIA ALBERTO

Via Saluzzo, 23 bis - TORINO

Accurate repairs. Contact us for whatever your needs.

L'Ala - 1950 n. 10 pag. 28

Poster advertising



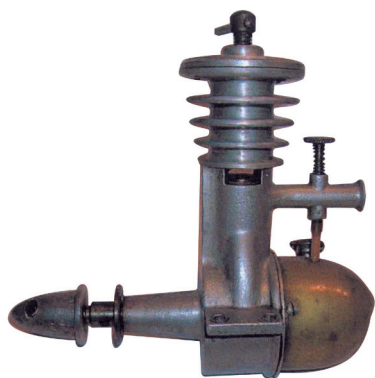


Photo 6: Elia Titano

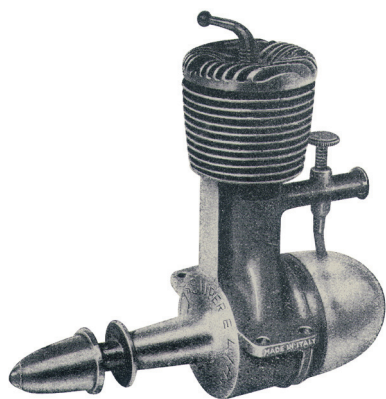


Photo 7: Super Elia

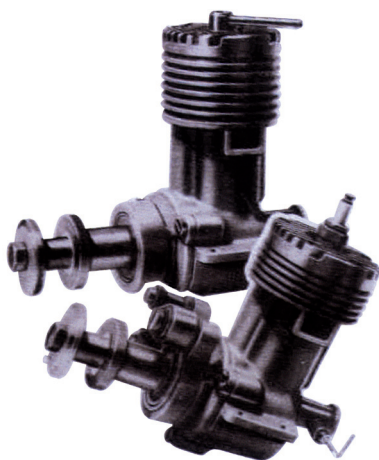


Photo 8: Elia 6

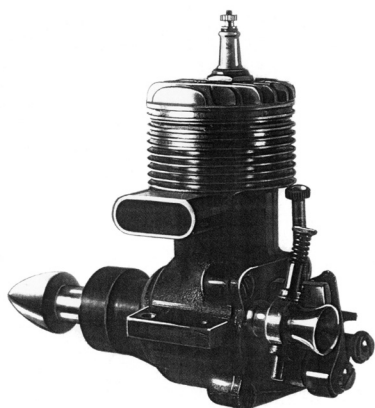


Photo 9: Elia 10 spark

so the comparison was almost direct. When it was in motion, we could hardly believe it, we were afraid that our ears were tricking us, and so with the "Duemo 2" tachometer we were able to check the 13,200 revolutions per minute, exactly, with a propeller diameter of 25.4cm and a pitch of 35.5cm(10/14)

Before closing this preface and moving on to speaking about the ELIA 6 replica, I would like to recount a nostalgic memory of Elia the man, by Angelo Gouthier, from DALL'ALBUM DEI RICORDI DI PICCOLE ALI - (1946)(from Nino Ghiotto's archive)and also from L'Aquilone-SAM 2001 - N° 34 Nov. Dec. 2007. The title and text recite like so:

"It's not my fault"!

Really, I swear, it's not my fault. It was a magnificent Sunday in Spring 1945. I didn't know where to go to spend the afternoon; my friends had gone to the cinema, but I hadn't followed them, not wanting to waste such a beautiful sunny day. And it was so, almost without wanting to, I jumped onto my bicycle proposing a trip around the surroundings of Torino to myself. Ten minutes later I was passing by the FIAT Mirafiori. Yes, "Mirafiori": a well-planned name. How many memories of aircraft modelling in the years before the evacuation. But... what if I popped in to have a look? And it was so that I found myself at the airport. There wasn't a soul. Everything was silent and...ruin. But what as that blue mark that was moving in the middle of the meadow? My heart skipped a beat: it was a guy with a model airplane in hand! My old passion was immediately awoken. A short run....cross-country cycle and I was quickly beside the modeller enthusiast who seemed to be ignoring me. My attention turned to his model airplane, actually, to the model engine (but what was mixture made of? What a stink!). I had arrived in time. The centering was finished and soon the model motor would have taken flight. While the maker was rolling himself a cigarette I seized the occasion to ask him a couple of questions (the desire to speak not lacking).

The Model aircraft maker, whose name, Elia, I had read on a slip of paper glued to the fuselage, answered me extremely politely and thoroughly. I noticed the engine. Truly beautiful. On the ace of the crankcase was incised the name "ELIA". Excuse me, was it you who built the engine? I asked the air modeller. He smiled, and, with a hint of irony answered me affirmatively .

In my heart I thought he had to be an ace. Then came the miracle. Just a few strokes of the propeller and the engine started, with a spectacular crescendo; a little tuning of the carburation, and the model, let free, darted away with the ambitions of an interceptor and it climbed and climbed until suddenly the engine stopped, beginning to glide, calmly and regularly.

I truly remained with my nose in the air and mouth open in admiration.

Elia was satisfied with the behaviour of his motor and opened the floodgates to a swarm of exclamations, amongst which, dominant for its frequency, his preferred: Brau Vigin (Bravo Luigi).

Since then, I have frequently returned to Mirafiori and I have gotten to know that nice young guy better, with his mop of hair falling over his eyes, his trousers always smelling of ether and stained with oil and I have learned a lot about him (amongst other things he has a small engine workshop and is married); we have actually become friends and now we no longer use formal language with each other.

Now I own a litte engine, naturally an ELIA, and I assure you that it works perfectly well.

And so, believe me it's not my fault that I have returned to model airplanes. I swear it: it's my friends' fault who that day wanted to go to the cinema, and it's also that nice guy Elia's fault...

From this old written memory, even if short, Alberto Elia's geniality is highlighted as the peculiar stroke of his motoring history. With a different partner, as I have already mentioned, more forward-looking commercially, he would have surely continued and increased his initial achievements.

After so many years we can still say: **What a pity!**





The 2010 Replica of the ELIA 6

In the foreword the peculiarities of this engine were highlighted, designed and realised in 1948 by Elia Alberto, asserting itself on the occasion of the competition held in Forte dei Marmi (Versilia - Italy) in the Spring of 1948.

The model was distributed, at that time, by Aeropiccola in Torino as the sole agent.

Its rotation is anticlockwise (*time being viewed from in front: It was just at the beginning of the use of the American technique of clockwise rotation, anti-clockwise viewed from in front, later adopted*) and its capacity is 6cc and is used especially for free flight, for U-Control and also for model cars of velocity of that time (see e.g. "Victory" – Aeropiccola – Torino- Italy). The variations hereafter listed highlight the versatility of the Elia project.

The replica is identical to the original together with its technical characteristics which are:

Bore	20mm
Stroke	19mm
Cubic capacity	5.97cc
Power	0.34hp

The replica includes the three variations, expected as in 1948, all with the same cubic capacity.

They are:

Diesel (auto ignition) "AUT" (photo 10).

Electric start (spark) "D.V." (photo 11) obtained using the crank case of the Diesel with the addition of the part. 11a in place of the contra-piston and the addition of the timing contact breaker part.11b.

Glow "G" without contact timing breaker, with the same part. 11a, but with the glow plug instead the spark-plug.

Only the BENZ spark type with a crank case (photo 13) of which the number of winglets was reduced to 4 instead of 6 due to the absence of the contra-piston: also in this case, the motor can become "glow", eliminating the contact timing breaker, using the appropriate glow-plug (photo 14).

The motor is supplied in a white box (photo 15) along with a copy of the original instructions of the time in Italian and English, made by Aeropiccola and dated 21/03/49, in which you can read both the serial number of the engine sold and the guarantee as well as the relative prices of the different types of engines, "AUT", "BENZ" and "D.V."

The Glow type is missing because it was only introduced in 1950 by Elia.

Unfortunately I don't remember who supplied me with the original instructions, and for this I ask forgiveness (age plays these terrible tricks) certain that I will, sooner or later, remember your name and here thank you for the kindness expressed to me.



Photo 10 - Elia 6 AUT

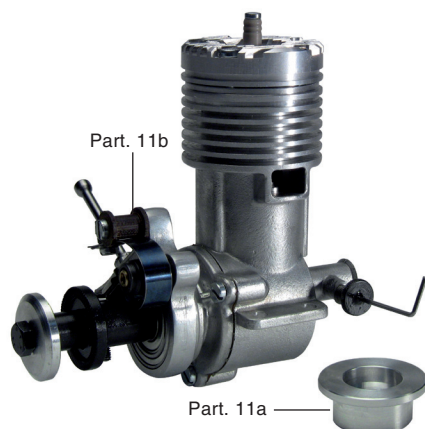


Photo 11 - ELIA 6 spark derived from ELIA 6 AUT

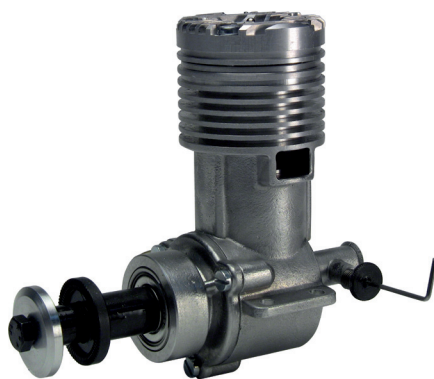


Photo 12 - ELIA 6 glow derived from ELIA 6 AUT



Photo 13 - Elia 6 - BENZ - Spark



Photo 14 - ELIA 6 glow derived from ELIA 6 Benz-Spark



Photo 15 - ELIA 6 engines are supplied in a white box

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