SPEED DIGEST

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The "CISITALIA"

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THIS outstanding little racing machine has a very interesting story.

During the war, a wealthy amateur racing driver of Turin, Piero Dussio, got the idea of building a series of cheap, easy to handle, high performance racing machines to be built in big series and evenly matched.

His dream was to have the best drivers in the world to draw their racing cars at the start, and then race among themselves with equal machines. So, study started, and after the war was over, a factory was repaired and rebuilt and the new name "Cisitalia" was chosen.

The famous designer Giacosa was loaned by the Fiat factory, and in the summer of 1946 the first cars were ready. The famous racing driver Piero Taruffi was the head of the racing department and the little 1100-cc cars were outstanding from their first appearance. In fact, a few days after the Turin Grand Prix of 1946, a special race for unsupercharged cars up to 1500-cc was organized on the same circuit in the park of Turin. Gordini headed the French Simca cars; there were a few Maseratis and Fiats and a complete team of the new Cisitalias driven by the greatest drivers of Europe: Nuvolari, Cortese, Taruffli, Chiron, Sommer, Dusio and Biondetti. A real galaxy.

The little Cisitalias gave a wonderful exhibition of reliability, road holding, acceleration and stamina and after a gruelling race, Dusio won from Cortese, Sommer and Chiron. A real good show.

During the first months of 1947, no less than 20 racing machines were dispatched to Cairo, Egypt, for the Grand Prix of Cairo, organized for Cisitalia cars only.

The race was won by Cortese (this writer was one of the official drivers of the team that included such famous names as Chrion, Taruffi, Brivio and Tadini.)

During the 1947 season, the races for unsupercharged small cars or for 1100-cc cars without any other limitation, were very popular in Europe, and Cisitalias scored a lot.

In Italy, the Italian championship for cars up to 1500 (unsupercharged) was won by Taruffi and Cisitalia, followed by a fleet of other Cisitalia drivers. More than 40 of the little racing cars having been built so far.

In 1947, the French Simca cars had proved a little bit faster than the Cisitalia cars, but no Simca car of the racing type has been sold. The Cisitalia remained the only cheap and sound racing machine on sale in Europe.

The extraordinary performance given by the Cisitalia is due to the extremely light construction, the whole car, in racing trim, having a weight of only 350 Kgs.

The tubular frame is very sturdy and featherweight and the road-holding is outstanding. Of course, it is easy to have very good braking power on such a light machine. The power of the engine is very small but a top speed of over 100 miles per hour is easily reached.

The acceleration is outstanding and on twisty circuits, as are the European "round-the-houses" tracks, the Cisitalias are faster than most of the bigger cars. It is often exhilarating to see, in a real grand prix race, some little bold Cisitalia at the start among the big cars, and then to see the small car getting the best of many cars with engines four times as big!

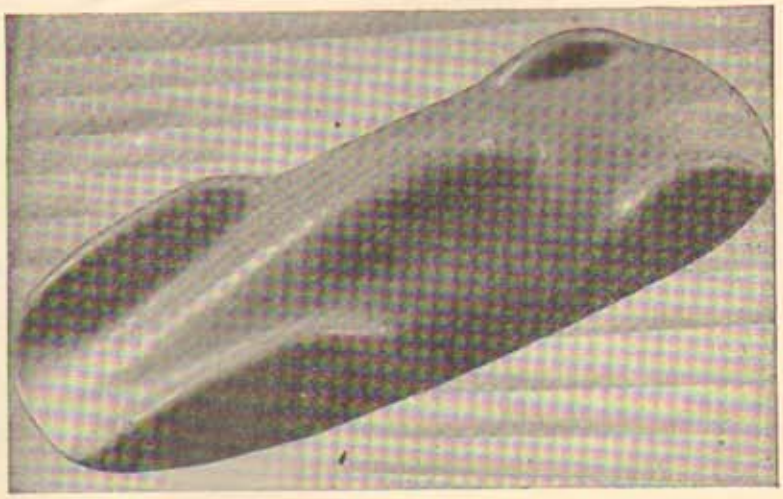
Technical description of the Cisitalia single seater:

Engine: Four cylinders; 68 MM bore; 75 MM stroke; 1,090 CC; compression ration 9.8; maximum power at 5500 RPM; 60 HP; speed on top gear over 100 MPH; cylinder block in cast iron; cylinder head in special light alloy; overhead valves two per cylinder vertical and operated by push-rods; bronze valve seats; special steel construction rods; light alloy pistons; Weber carburetor; high-pressure lubrication with oil radiator fitted near the water radiator; coil ignition by Marelli system.

Gearbox: Three-speed gearbox with pre-selector and automatic gear change.

Transmission: By special shaft with cardan joints and special underslung gear at the rear-end, so as to allow an extra low seating position of the driver.

Rear Axle: With gears cut by Gleason system and reduction gear. Differential mounted on conical roller bearings.



Stefano Bricarelli Photos

Top: The tunnel-tested model of the new 12-cylinder rear-engined Cisitalia grand prix car.

Right: Another Cisitalia tunnel-tested model—this car will be used in attempts at breaking high-speed records.

Frame: High resistance aviation type steel tubes soldered and extremely stiff and light. The soldering of the tubes is done by the Arcaton electric welding system.

Springing: Independent front wheels by transverse spring and hydraulic shock absorbers. At the back, coil springs and hydraulic shock absorbers. Hydraulic brakes.

Wheels and Tires: Rudge wheels and 15x5.00 tires at the front and 15x4.25 tires at the front.

Oil and Petrol Tanks: In light alloy material. Body in aluminum.

Many parts of the car, such as cylinder block, rear axle and brakes are standard spare parts for Fiat cars and this explains the sale price of these cars—about 40 percent of the price of a racing Maserati 91-inch four-cylinder racer.

We can now give some details of the almost incredible and very ambitious program of the Cisitalia racing factory.

The technical department is now headed by the Abarth-Hruschka-Sholz combination of the famous Porsche Studios and the great Austrian engineer and well known Eberan von Eberhorst has the supervision of all designs.

For 1949, the Cisitalia program includes:

Four-cylinder twin over-head camshaft, two carburetors, unsupercharged cars with 1100-cc and 1500-cc engines. The 1500-cc engine won't be a bored out 1100-cc, but will be a full size 1500-cc. The frame will be tubular, with four-wheel independent suspension and the cars will be single seaters.

Two-seater sport cars fitted with the same engines as above, using tubular (not girder) frame and independent front suspension only, and conventional rear axle. In all Cisitalia models, the suspension will be by torsion bar.

Formula II grand prix car. This car will use a girder tubular chassis similar to the grand prix supercharged model. The brakes will be of the four leading shoe type and hydraulic. The suspension will be independent on all four wheels. Torsion bars used. The engine will be at the rear of the driver with the driving position almost central, and the transmission will be at the rear.

A five-speed gear box with syncromesh on all speeds (Porsche patent) will be used. The engine will be a 12-cylinder (opposed horizontal blocks of six cylinders each) using six special carburetors and air cooling.

Grand prix car for Formula I events. This formidable machine will have the same girder tubular frame as the Formula II car and general layout will be similar. The engine will be a 12-cylinder (opposite blocks of six cylinders horizontally fitted) with two or three-stage supercharging with Cozette-Zoller-type blowers.

The cylinder capacity will be 1500 cc. The transmission will be on the rear wheels, with a special self-locking differential, also fitted on the Formula II car, and there is also a transmission on the front wheels that can be disengaged by the driver at will.

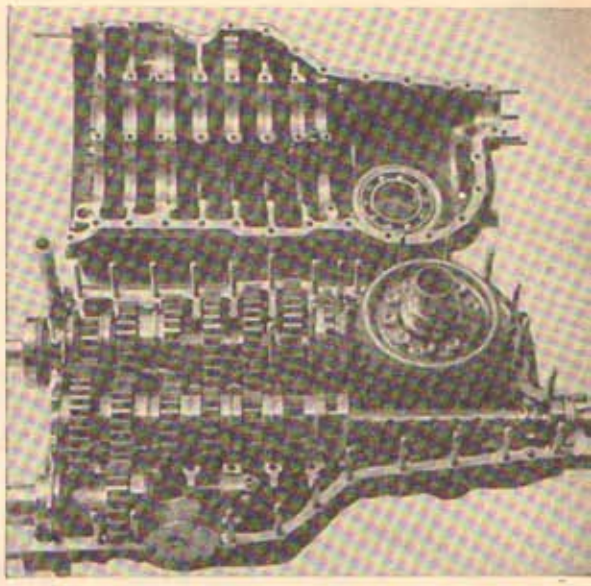
Thus, it will be possible to use the full power on the four wheels when necessary, and on the rear ones only when desired. No official figures are given for speed or power of the new grand prix racer, but a power output of 400 HP is confidently expected while the road car should attain a speed of over 360 KMPH.

The Cisitalia people hope to break many records and a special superstreamlined car has been tunnel-tested and the 1500 cc class record is expected to be pushed over the 400 KMPH limit.

This is the ambitious racing program of the Cisitalia factory, but this young firm also has in mind a very interesting standard car production and these new models will be of a very advanced design. The typical Porsche design will be used and all these cars will have rear engines and independent suspension by torsion bars.

The Cisitalia two-line sports car will be fitted with a rear six-cylinder aircooled engine with three carburetors and will have synchromesh gears. Also a touring two-litre car will be built, rather on the lines of the Volkswagen, but with visible improvements. This car will have six seats (two lines of three seats each) and will have a 2.60 M long wheelbase. The power-to-weight ratio of these cars will be extremely good, and some very interesting results will be scored. The touring two-litre will be fitted with one or two carburetors.

A special system will allow the suspension to rotate at will around an eccentric, and lift the car bodily and increase, by a very wide margin, the road clearance. This particular device has been studied for eventual cross country use, military use, etc. It is well known that the Cisitalia factory has now great connections with Argentina and the light two-litre has been specially studied for that particular market.



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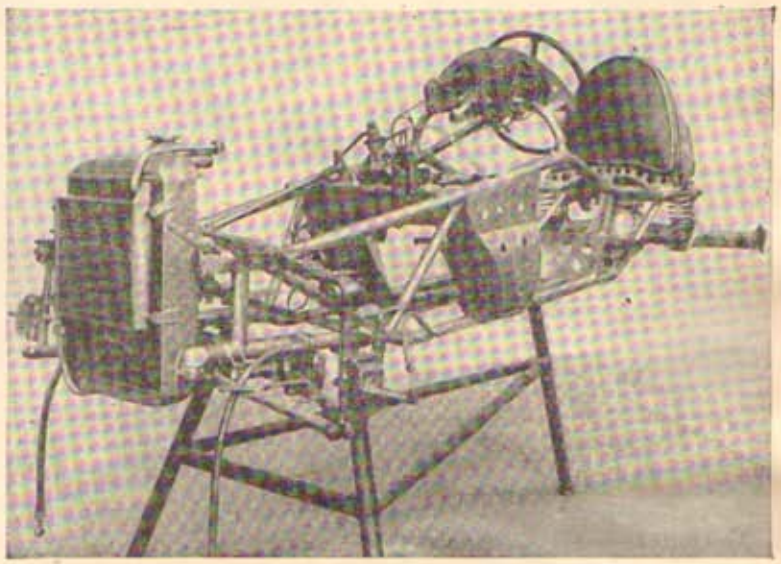
The unusual five-speed gear box of the new grand prix Cisitalia race car.



Cisitalia Photos

Above: This illustration shows the complete layout of the tubular single-seater 1100 CC Cisitalia.

Below: The front assembly and steering gear.