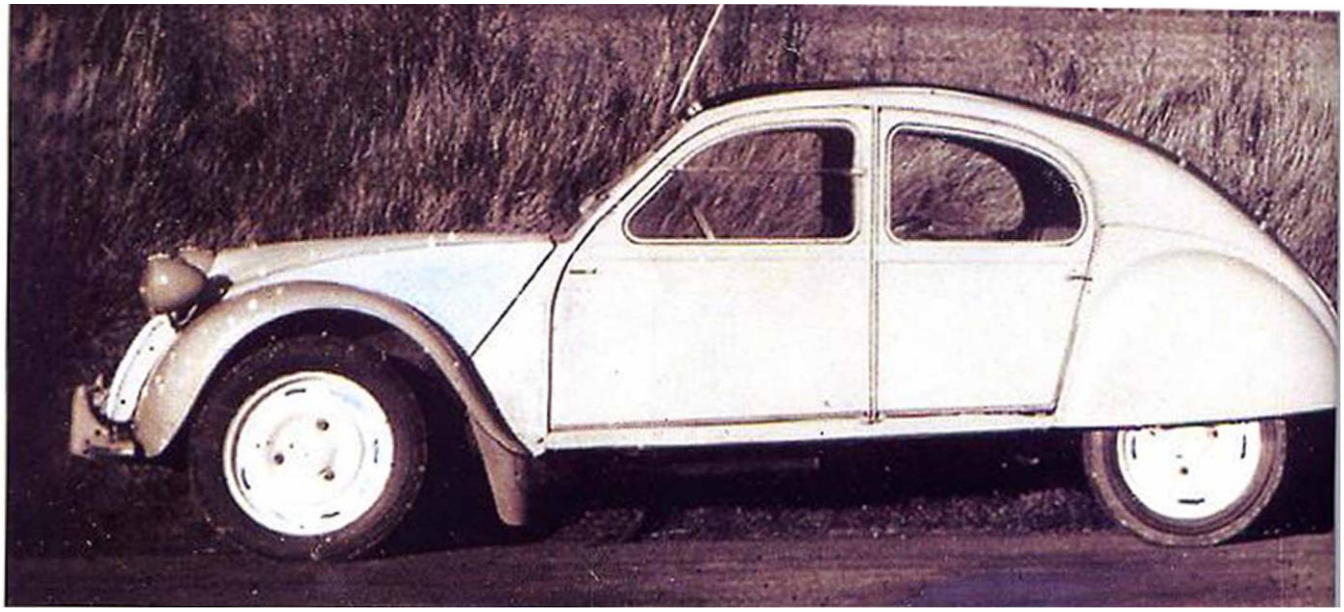


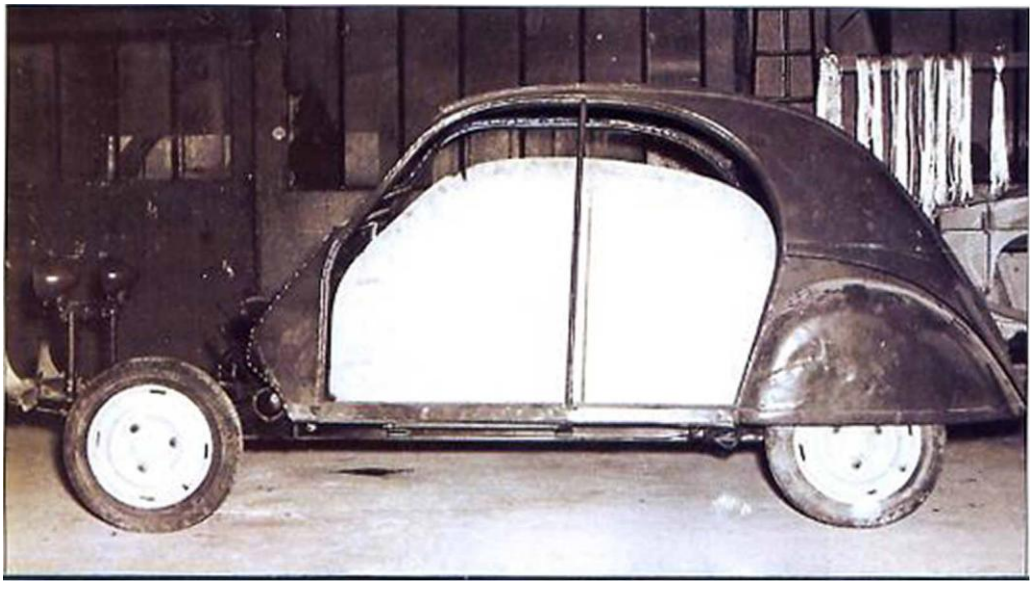
# LA 2CV DF SURB

***Jean Dagonet first of all worked to improve the performances of the 2 CV A by modifying its small engine of 375cc. In the month of January 1955, he proposed a transformation of the body being both modern and original.***

D'APRES GILLES COLBOC, PHOTOGRAPHIES COLLECTION PARTICULIERE

Less than one year after the marketing of the first 2 CV A during the summer of 1949, many automobile shops and suppliers worked to improve the performance and top speed of this small car however voluntarily modest, Among them, Jean Dagonet, who created and directs the Faverolles Workshop in Marne, points out in 1952 he can make adaptable cylinder pistons. By raising the cubic capacity of the original small twin-cylinder engine from 375cc to 425cc, thus increasing the performance noticeably. Top speed increases from 60 to 70 kilometres per hour. The following year they develop an aluminium cylinder which a chrome interior. This famous DF Chrome unit is highly sought after today by the collectors. Allowing a new progression of performance to the Citroen engine,

*On what seems to be a new frame, a body of 2 CV A is recognizable with the absence of the side indicators. If one takes in to account the stall of the rear fender, the aforementioned was already passably useful. The frame was equipped with a bumper front and back. However, it is not yet equipped with suspension pots and it is clear that it rests on stands skilfully masked by the wheels. The purpose of this scene is to explain the three stereotypes carried out in the building at the Faverolles Workshop, the transformation from a simple 2 CV Sedan into 2 CV DF Surbaissée is obvious in this scene. The gauge being used to modifying the height and the bending of the profiles framing the doors makes it possible to appreciate the importance of the middle support moved five centimetres towards the back and the increase of 12degrees in the steepness of the windscreen.*



*These photographs show the profile of a 2 CV with the modified body by the Faverolles Workshops and another 2 CV A with its original body, it highlights the sudden transformation of the Small Citroen. The deliberately sporting character of the new 2 CV DF Surbaissée (flattened) are obvious here. The original hood (roof) shortened to adapt to the new body, known as the Personal Car, Jean Dagonet had a hood made to measure, comprising a large flexible glass material (plastic). At the same time this allowed a weight reduction by removing the metal boot lid, the rubber seal and the glass out of the window, while considerably increasing the rear visibility.*
*The 2 CV DF Surbaissée was improved by hand through the level of the wheels (ride height), the sides of the bonnet and the grille, indeed, this car would be in fact a sheet metal prototype of the 2 CV DF Surbaissée, or which in any case could be regarded as such, it is equipped with a bonnet having preserved the grille and louvers (rippled pattern) from the original sheet metal.*

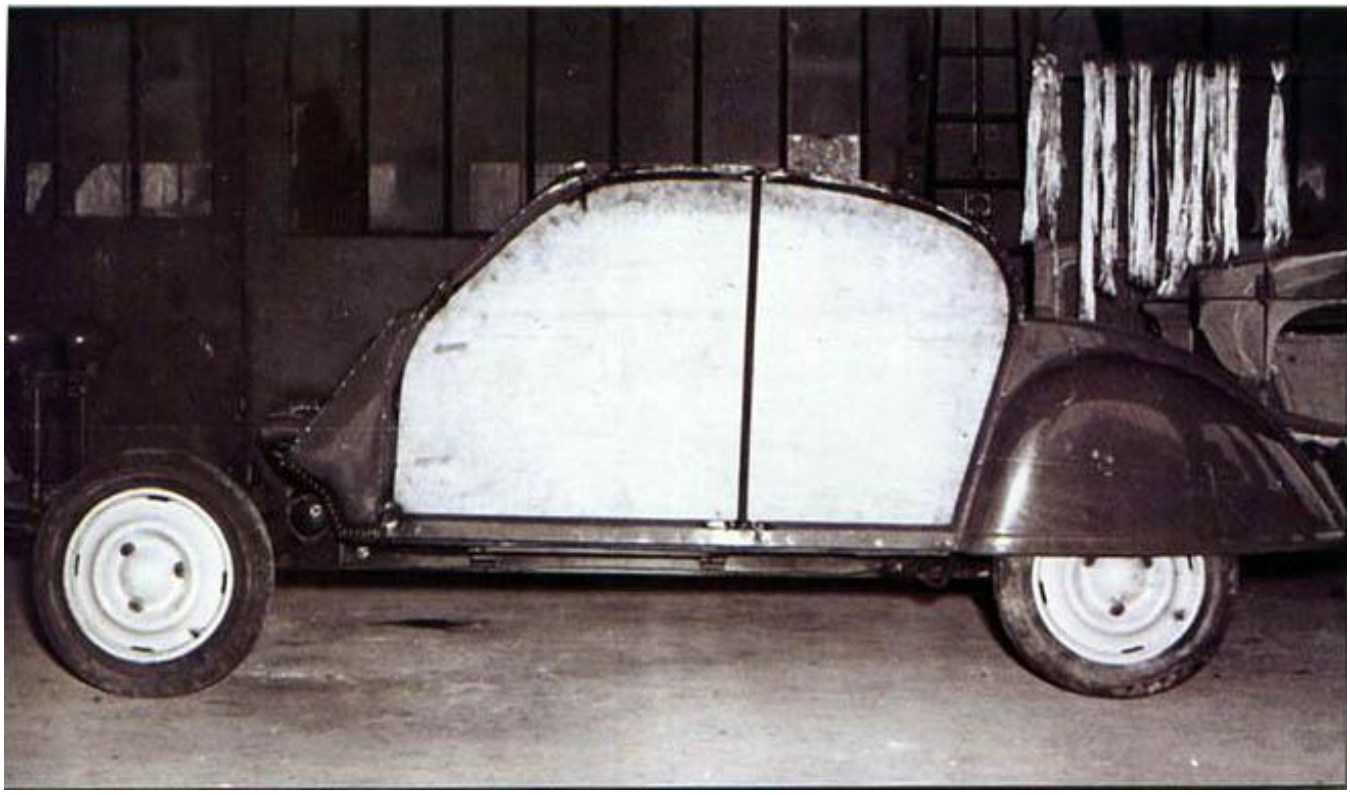
# AISSEE DE DAGONET

*An unfinished right-hand side door being removed from its plaster mould. Before it is cut from its template the fibreglass fabric is impregnated with resin. Three superimposed thicknesses make it possible to obtain a light and robust door. Fast drying is obtained by the use of infra-red lamps. A metal hinge was placed in the resin during the moulding, you can make out its end held in the left hand by the character on the right-hand side. Sold as a spare part by the authorities with the double chevrons, this element is no doubt of Citroen origin.*

in fact one 2CV A fitted out in this manner took out the Bol d'Or (Golden Bowl) in May of 1954.
The Faverolles Workshop also proposed a full range of intake and exhaust pipes for the 2 CV, allowing the use of various types of carburettors and single or double exhausts.
Parallel to the increase in the engine output, Jean Dagonet also worked on improving the aerodynamics of the Small Citroen. Because, like any racing driver in this middle of the Fifties, he understood that the performances of a car depends largely on its capacity to offer the least possible amount of air resistance. It is from this concept that a new 2CV is born, that he baptised the DF Surbaissée (Lowered).
The realisation of such a concept, despite everything, still preserves the traditional aspect of the 2CV, this requires two types of successive operations and calls upon two very distinct body specialities, one traditional and the other particularly innovative for the time. It consists of, on one hand, sheet-metal work and on the other, the work of a new material which is then staring to be used more in automobile bodies, fibreglass. At the time, to draw attention, less technical and more fashionable terms where used for general public, it is thus quite simply explained (reference to the remodelling).
The adoption of certain body components made out of this material allows for a weight decrease, this process lends itself particularly well to the production of parts in small amounts. Moreover, its implementation is relatively easy, starting with moulds which require only one limited investment.
The panel beaters are in charge of work which makes it possible to lower the overall height of the vehicle by 18 centimetres. To achieve this the body is separated from the frame beforehand, Jean Dagonet imagined modifying the higher pressed sections and the lower section at the same time.
The higher pressed sections on both sides of the body, including the panels which make up the rear section, are cut out. The curved section forming the entourage of the doors and including the side gutters are preserved.

*The outside of the door has its burs removed using a power saw. The metal hinge will also be reduced which will make it possible to adjust the height of the door once on the car. The only thing remaining is to equip it with its glass and lock. Some 2 CV Dagonet's were equipped with an interior control connected by an articulated rod.*

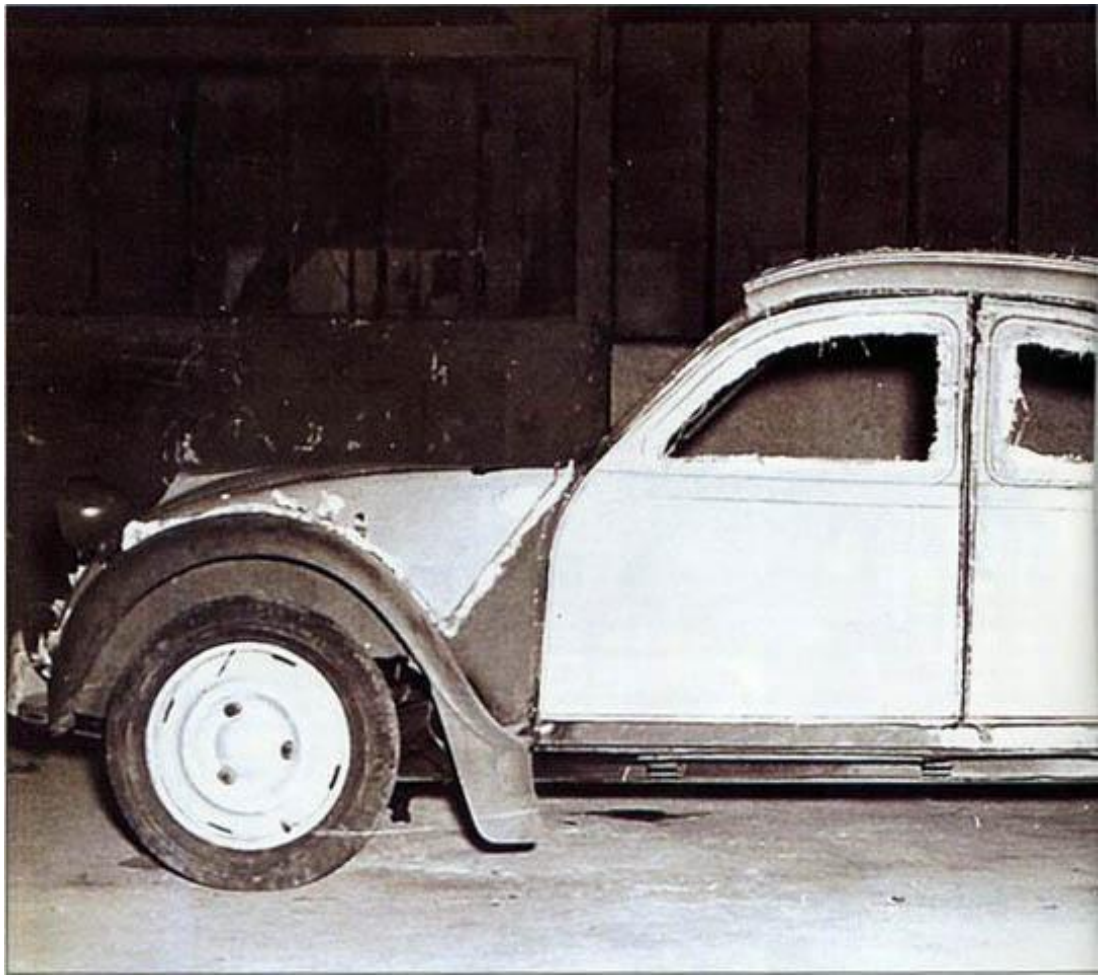
1.



*The body of the 2 CV A was removed and another body, with better rear fenders, was put on the frame. Once the panel beaters had finished, 18 centimetres were reduced. The top of the car now marries perfectly with the template and the centre post has been moved back. The height of the dashboard was brought down from 67 to 57 centimetres by decreasing the aforementioned in the lower half.*

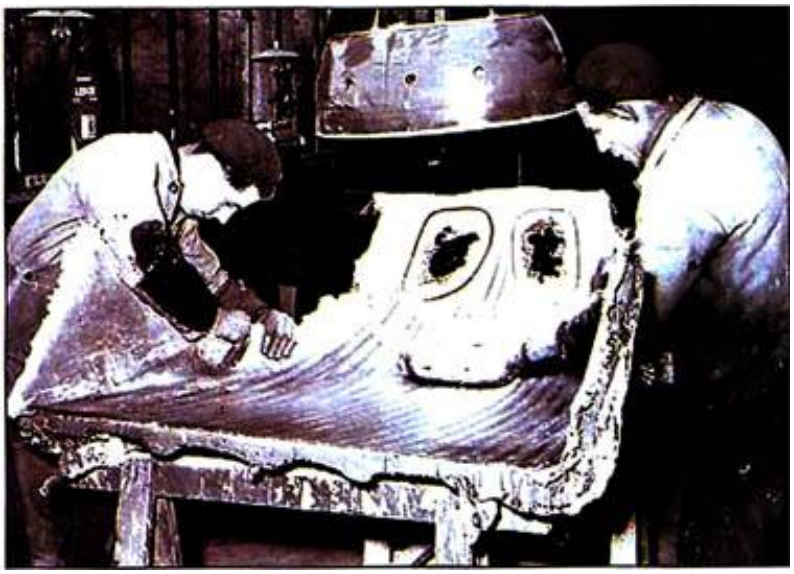
The 'surbasement', lower shape, of the body is first of all obtained by a slope of the windshield towards the back of 12 additional degrees. Then the streamlined framing of the doors is shortened, aligned and re-welded to the level of the rear fender.

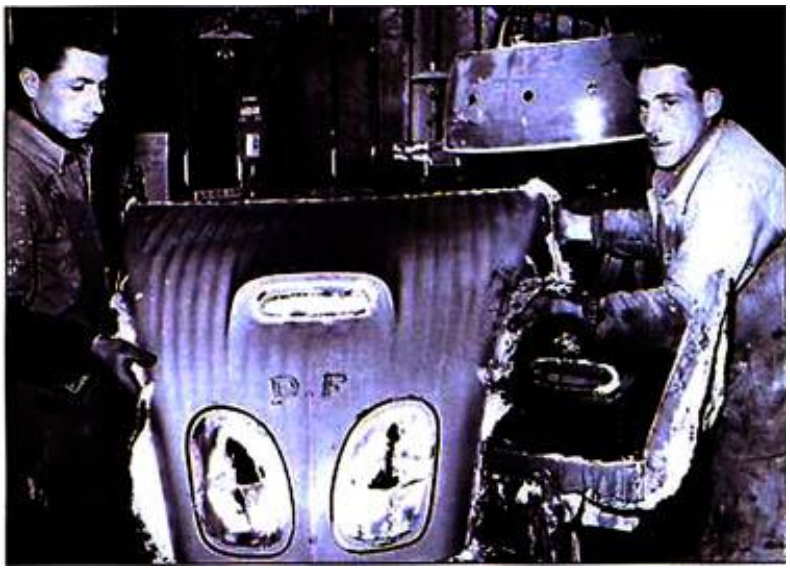
Saving height (head room) is obtained by reducing the lower part of the body by ten centimetres. The vertical portion of sheet metal near the floor pedals, located plumb with the dashboard, is removed. Only the inclined section at the front, being used as footrest for the occupants, is preserved. It is directly connected to the bottom of the dashboard, where it is welded before the modification.



*The seven elements made out of fibre glass are carried out by Faverolles' Workshop, the bonnet, the four doors and the two side elements of the roof, which are temporarily positioned on the body for a test before being trimmed and adjusted. The two side elements of the roof are more or less bolted on a section to preview, then welded on to the body from the top of windshield bay to the rear of the body. The rear face with three medallions and the front fenders of original sheet metal are preserved.*

*Like all the stereotypes reproduced here, the aforementioned are in this scene. Two workmen from the Faverolles Workshops are working on a fibreglass bonnet and carry out its release from the mould. Even upside down, one easily recognises the Dagonet bonnets first generation identity (bonnet beans) because of his grille made up of two vertical openings. The openings on the sides were intended purely for the evacuation of hot air and were simply removed.*

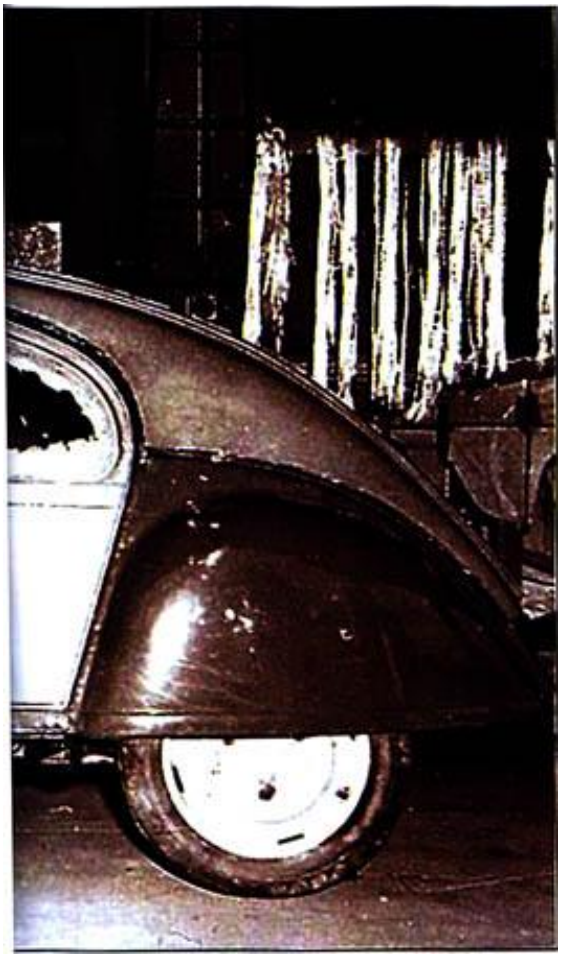





The last operation of metal work consists of shifting the middle support comprising the hinges and support for the front and rear doors. After reducing its height, it is then repositioned five centimetres towards the rear and re-welded.

Taking into account these modifications, new components must be designed to adapt to the new body shape. They are the side elements of the roof, the front and rear doors as well as the bonnet. These parts are produced from reinforced fibreglass resin. The interior of the doors is fitted with a flocking containing wire wool (insulation). The photographs published here reveal the traditional process of these alterations, but also, at the time of moulding and releasing from the mould, the apparent absence of protection of the workmen who handle the fibreglass resin. Back in the mid Fifties, when working with these materials its stammering that nobody was aware of the health hazards incurred by their actions. This economic addition makes it possible to reduce the weight of the vehicle which Jean Dagonet himself estimates to be 10 kilogram's. This transformation especially improves the drag coefficient, similar to the famous Cx, which makes it possible to increase the top speed by 10 kilometres per hour. By reducing the height of the body, lowering the centre of gravity of the vehicle and the use of lighter components also makes it possible to improve the handling of the small Citroen. To market this transformation, Jean Dagonet at the time planned to provide his agents with components prefabricated out of plastic with the instructions for the modifications and a box of how to. In its directions, it would explain how to take care of the sheet metal body modification, as well as the position of the plastic components and painting. The downtime necessary for such an operation is estimated at sixty hours. The cost of transforming from a simple 2 CV into the very slim 2 CV DF Surbaissée is, in January 1955, 120000 francs whereas a new 2 CV AZ costs 366000 francs. The (Faverolles Wizard) estimated however that the projected sales of this transformation would make it possible to lower the price of the fibreglass components.

Many amateurs, pilots of rallies or devourers of kilometres, will of course be interested by this 2 CV DF Surbaissée which transforms the simple 2 CV into an attractive "sporting" car capable of astonishing performances. However, today, in the absence of concrete data, we are still unaware of how many of these cars were assembled. Many reports over time show the 2 CV Dagonet exploiting its qualities in the most varied sporting tests. Among the three surviving cars now listed, only one type is described in this article, preserving the fabric hood, the other two more recent ones have a body completely made out of a one part mould of fibreglass. ●



*Like the doors and the side elements of the body, the bonnet is dried by an infra-red lamp, they consists of three layers of woven fibreglass. Above the grille one finds the air intake intended to constantly supply fresh air to the air filter of the carburettor, the bonnet intake, complete with embossing, is raised in order to take into account the height of the air filter. Of course, D and F seen on the moulding stand for Dagonet and Faverolles.*