

E V E N T

Announcing the Berlingo

I N T E R V I E W

*Edouard Molinaro:
looking for action*

S P O T L I G H T

*Citroën Vigo:
a leader in industrial progress*

I N T E R N A T I O N A L

Citroën Hellas: on the Sacred Way

double chevron

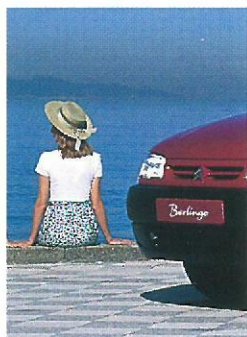


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The summer of the Berlingo

Citroën's design office has dreamed up a summer surprise for trade customers: a brand new utility vehicle. The Berlingo, as it is called, looks like a passenger car but has all the functions you would expect of a practical and ergonomic utility vehicle. The new arrival broadens a utility offering that already comprises the C15, the Jumper and the Jumpy. Double Chevron invites readers to meet



an appealing new vehicle. The recently launched Saxo is already flexing its muscles in the Saxo Cup. The season kicked off on 5 May and will run until November. If you think the Saxos are quick off the mark, you will find the Network Analysis Teams are pretty fast as well. The teams

identify the cause of vehicle incidents in order to take fast and effective action. This ambitious scheme is part of Citroën's push towards total quality. In Greece, Citroën has gained a strong position thanks to the efficiency of Citroën Hellas, the marque's sole importer. Efficiency was also fundamental in the organization of a special day for the company's trainees. The schedule included a tour of the Aulnay plant and a sneak preview of the Saxo. An innovative idea for making trainees feel part of the company. If a company builds its image through continuity, then the Citroën dealership in Antony is a remarkable example, since it recently celebrated its 70th birthday. Its action-packed life story is just like the films shown at the

BERNARD GUERREAU
DIRECTOR OF CORPORATE COMMUNICATIONS

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Magny-Cours, Sunday 5 May. First race in the Saxo Cup. First enthusiastic impressions from the drivers.



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Announcing the Berlingo...

Citroën is pleased to announce a revolution. The Berlingo is a utility vehicle offering the style, comfort and safety of a saloon. Meet an appealing new arrival.



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Eighty Citroën trainees were guests of honour for a sneak preview of the Saxo and a tour of its production plant. A day to remember for all present.



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Citroën Hellas: on the Sacred Way

Citroën is the leading French carmaker in Greece, ranking number one in both the M1 and M2 segments. A position achieved through the efficiency of the Syngelides family and Citroën Hellas, the marque's sole importer in Greece.



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Network Analysis Teams: quality and speed

The pursuit of total quality is fundamental for Citroën. The Network Analysis Teams provide a fast and accurate analysis of customer vehicle incidents.



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Chairman of the 7th Valenciennes Festival of Action and Adventure Films, Edouard Molinaro talked to Double Chevron about his career and about a 15 CV that played an important role in his life.



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The Antony dealership: continuity in customer service

For Germaine Arvongue, co-founder of the Antony dealership, the past 70 years have been part of the Citroën adventure. Today, her daughter is carrying on the tradition.



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Citroën Vigo: a leader in industrial progress

The Vigo plant in Spain produces the AX, ZX, C15 and - since its recent launch - the Berlingo. We take readers on guided tour of an assembly plant that uses some of the most advanced working methods and technical solutions to be found in Europe.





The Saxo dons its sports kit

When French customers order a Saxo, they get a video cassette showing all the accessories available for their vehicle. While they're waiting for their Saxo to be delivered, they can view the wide range of accessories on offer, such as the sober but sporty bodywork trim kit comprising a front spoiler with an optional fog kit, two lower valances, a rear skirt, a ledge for the top of the hatch and an exhaust rod.

The ETPC moves into sales

From September 1996, holders of a certificate in sales techniques or sales and accounting will be able to enroll for a two-year course leading to the *baccalauréat* in sales and sales representation at the ETPC, Citroën's private technical school. Recognized by the Ministry of Education, the ETPC has defined a two-part course. The first part covers the official national curriculum for the vocational *baccalauréat* in sales and sales representation while the second part is Citroën's own specific programme of initiation to vehicle sales and to Citroën corporate culture, products and services.

Hippo-Citroën surfs the Net

Cybernauts can now surf the Internet from the Hippo-Citroën restaurant on the Champs-Élysées in Paris. Seven computers have been installed in a 100 m² room where visitors to the restaurant can spend half an hour cruising the Internet for a nominal fee.

Inaugurated on 9 April, the operation was organized in association with Microsoft France, Siemens Nixdorf and Itinérís. Computer fans can also discover Citroën's "mobile office" - a concept available on both the Evasion and the Saxo - and admire the latest products developed by the firms who combined their talents to open the French capital's first cyber restaurant. Assistance is available to beginners looking for expert guidance as they embark on their interactive journey through cyberspace.

A city slicker for the year 2000

Per Ivar Selvaag, a 24-year old Norwegian, recently won first prize in a competition to design a Citroën city car for the next millennium. His highly original drawing was chosen out of a total thirteen submitted by talented students from the Vehicle Design Department in London's Royal College of Art. The project was sponsored by the marque's British subsidiary.

The students were asked to design a Citroën for the year 2010, a vehicle that combined French cultural values with the historical importance of the marque. Mr Selvaag said that his aim was to innovate in automotive design with his futuristic vehicle.



Ken Greenley, Director of the Design Department at the Royal College of Art, stressed the importance of this partnership with Citroën, which offered students a real opportunity to come into contact with the automotive industry.

The AX Diesel wins the title of European Eco-Car

The 3rd Eco-Tour of Europe took place between 22 and 26 April and was organized by the German Automobile Club (ADAC) and the Austrian Auto Moto Touring Club (ÖAMTC). Participating in the event, the Citroën AX 1.5 Top D won the title of European Eco Car in the diesel category while the Citroën AX 1.0i Top came second in the petrol category.



The third European Eco Tour ran from Bonn to Monte Carlo - a distance of more than 1,500 km - and brought together 48 petrol and diesel models representing twelve carmakers: Citroën, Daihatsu, Fiat, Ford, Nissan, Opel, Peugeot, Renault, Seat, Suzuki, Toyota and Volkswagen. All the cars were fitted with Michelin "green tyres" offering reduced rolling resistance.

Teachers learn with Citroën

Twenty-three teachers of science and industrial techniques recently met the industrial teams manning the Citroën plants in Saint-Ouen, Charleville, Metz, Meudon and Aulnay. The meeting was organized by Aulnay, which is resuming its monthly presentations on the activities of the automotive industry. Sixteen teachers

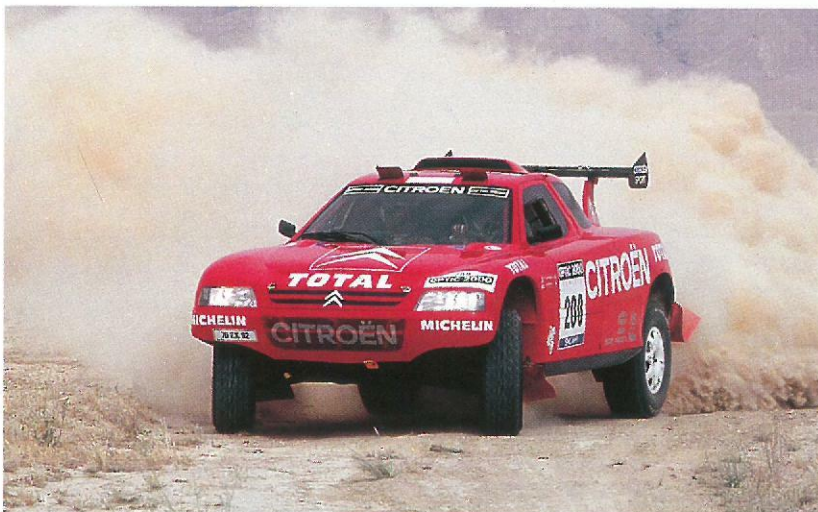
from the Professional Association for Adult Education went to the Citroën Institute in order to learn about the latest automotive techniques, and notably the electric vehicle.

All in the family

Citroën recently launched two innovative credit systems in France: Crédynastie 1 and 2. The objective of these new payment schemes is to help parents finance a vehicle for their children. Parents make a down payment - in a lump sum or monthly instalments - to reduce the amount that their children need to borrow in order to buy a car.

1996 Optic 2000 Tunisia Rally: another win for Citroën!

Pierre Lartigue and Michel Périn recently won the 1996 Optic 2000 Tunisia Rally in their Citroën ZX Rallye Raid. The dynamic duo came in ahead of Ari Vatanen and Gilles Picard, also in a Citroën Rallye Raid. The Rally took place between 18 and 25 April last and was organized in seven stages over a distance of 2,140 km including 1,734 km of special events. It was Pierre Lartigue's seventh victory in Tunisia, an achievement that serves to highlight the reliability of the Citroën ZX Rallye Raids and the marque's partners: Michelin, Total, Facom, AIS, Speedline, Magneti-Marelli and Valeo.



Citroën Quality: aiming ever higher

Automobiles Citroën is the first French carmaker to have all its production facilities - 15 in all - certified ISO 9000 and EAQF (Supplier Quality Appraisal).

This achievement is a visible indication of the progress made by the marque in its main area of concern: customer satisfaction.

Citroën at the students' rally

Citroën loaned five Saxos to students from the ISC Institute of Commerce for a rally organized on 31 March. The event brought together 160 teams from various schools and universities. The marque was also present for the 20th Paris Marathon on 21 April, with the loan of six AX Electrics and six Saxos for the opening of the race.

The Saxo Cup: first race

Off to a flying start

SUNDAY 5 MAY SAW THE LAUNCH OF THE 1996 SEASON AND A BRAND NEW PROMOTIONAL FORMULA, THE SAXO CUP. THIRTY-SEVEN DRIVERS TOOK TO THE TRACK, VYING FOR THE PRIVILEGE OF WINNING THE FIRST ROUND OF THIS COMPETITION WHICH IS SET TO RUN THROUGH TO NOVEMBER. DOUBLE CHEVRON WAS TRACKSIDE.

At the third green light it will be 2 p.m. precisely... Down on the grid the drivers nervously gun their engines in anticipation of the off, their eyes riveted on the red light. One green light comes on... then two... and they're off! The smell of burnt rubber fills the air as the 37 cars in the first-ever Saxo Cup race jockey for position before coming into the first bend. The latest Citroën Sport challenge begins to take shape.

All the cars are Saxos with identical racing specs, so it is only through sheer



skill that a driver can gain the edge during the 13 laps. The first lap is a frantic affair, with three or four drivers all smartly off the grid, pedals pushed right to the floor. Race commentator Philippe Soulet is already getting excited: "And as

Christophe Porcher goes straight through the chicane, his wheels send up a huge cloud of dust...". The race continues with Arnaud Duprey hitting the front and quickly opening up a gap of a few metres on the chasing pack.



Frédéric Lenoir seems to have made sure of second place, while Cyril Kotylac and Vincent Arpino battle it out for third place. The chequered flag finally comes down on Arnaud Duprey, with Lenoir and Kotylac coming home in second and third spot.

Drivers enthusiastic

The paddock at Magny-Cours is a mass of drivers, ever-watchful mechanics, dealers, families and friends. They have come here from all over France for this first Saxo Cup race to find out for themselves what this eagerly-awaited car is really made of. Expressions like "nice chassis", "what a car", and "hot wheels" drift across the paddock. Many of the 37 drivers are old hands at Citroën race events. In his tent, surrounded by a bustling team of mechanics busy fine-tuning his car, we



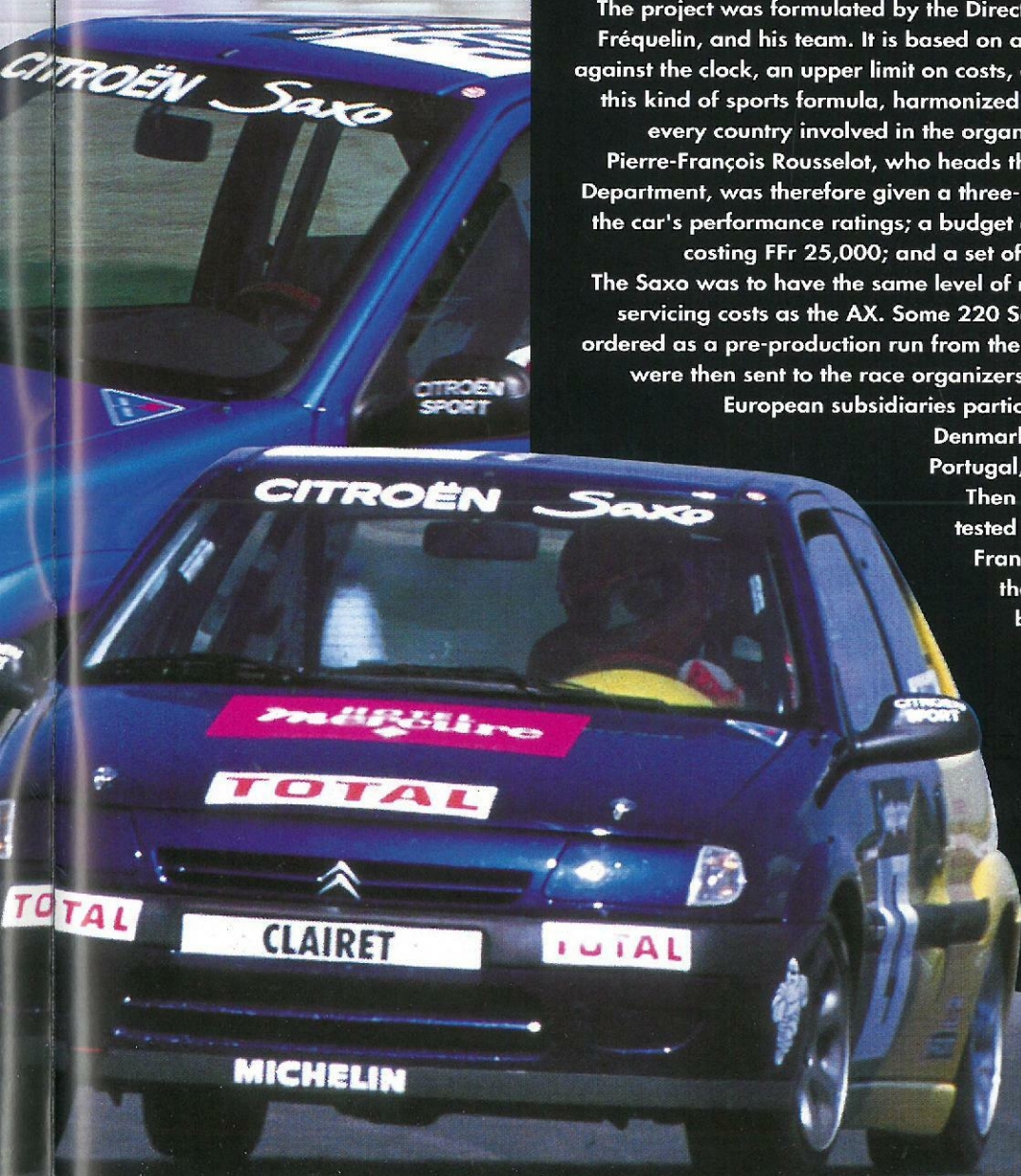
A MAJOR CHALLENGE

Devising, organizing and coordinating the Saxo Cup was a real challenge for the Citroën Sport team, which received the full backing of head office. They came up with a new promotional formula based on the latest car from the Citroën stables, the Saxo, even though the sports version (the VTS) has yet to be marketed. The project was formulated by the Director of Citroën Sport, Guy Fréquelin, and his team. It is based on a three-point plan: a race against the clock, an upper limit on costs, and, for the first time for this kind of sports formula, harmonized technical regulations for every country involved in the organization of the Saxo Cup.

Pierre-François Rousselot, who heads the Customer Competition Department, was therefore given a three-part specifications sheet: the car's performance ratings; a budget of FFr 110,000, a car kit costing FFr 25,000; and a set of reliability requirements. The Saxo was to have the same level of robustness and the same servicing costs as the AX. Some 220 Saxo VTSs were therefore ordered as a pre-production run from the Aulnay plant, and these were then sent to the race organizers in France and to the six European subsidiaries participating in the Saxo Cup:

Denmark, Italy, the Netherlands, Portugal, Spain and Switzerland.

Then the cars had to be road-tested over 10,000 km. Pierre-François Rousselot explained that "the Saxo had not yet been unveiled and so we had to go on several circuits with the car's exterior completely disguised. We even went to Albacete in Spain to test the Saxo under conditions of extreme heat — it was 45 °C in the shade!"





Nicolas Dupont from Mézen high school

find Frédéric Lenoir, a veteran of the AX Cup in bygone years. He says: "The Saxo is great car to drive, but it is quite unlike the AX. With its power steering and engine specs, it has to be handled completely differently". After the race, in which he came second, Frédéric claims: "I didn't want to take too many risks. There is no point writing your car off on Day One!" In the qualifying rounds held the previous day as usual it was all about who could clock up the



fastest lap time. Laurent Fresnais took pole with a record 2'01.65. He explained: "I took advantage of the slipstream effect. A fast car leaves a semi-vacuum behind it and if you stick to its tail you can benefit from a pocket of lower wind resistance". Laurent, who got his experience racing AXs on ice, said he was "perfectly in tune with the Saxo. It reacts just the way I like",



Jean-Marie Clairet

ELSEWHERE IN EUROPE

Whereas the AX cups involved six countries running four different formulas, today the Saxo Cup is organized by six subsidiaries (in Denmark, Italy, the Netherlands, Portugal, Spain and Switzerland) all organizing races based on the same formula, under the auspices of Citroën Sport France. For the first time ever, the technical regulations are the same for everyone, despite differing legislation on pollution, noise and the environment. Since the sports rules have remained more flexible, the system of calculating points and driver bonuses, the number of cars in a race and the length of the race can all vary from one country to the next. On Sunday 5 May, two other countries, Denmark and Switzerland, kicked off their seasons at the same time as France. Switzerland has created a special CSN (national sports council) prize for the overall Saxo Cup ratings, offering the best-placed top-ten driver under the age of 25 the chance to attend a renowned driving school during the following year. Spain, whose season began on 25 May, has the highest number of competing cars - 54 are in competition - and will therefore have two qualifying rounds and two finals of 27 cars each. A European meet of 220 Saxo Cup cars is planned for November at the Misano circuit in Italy.



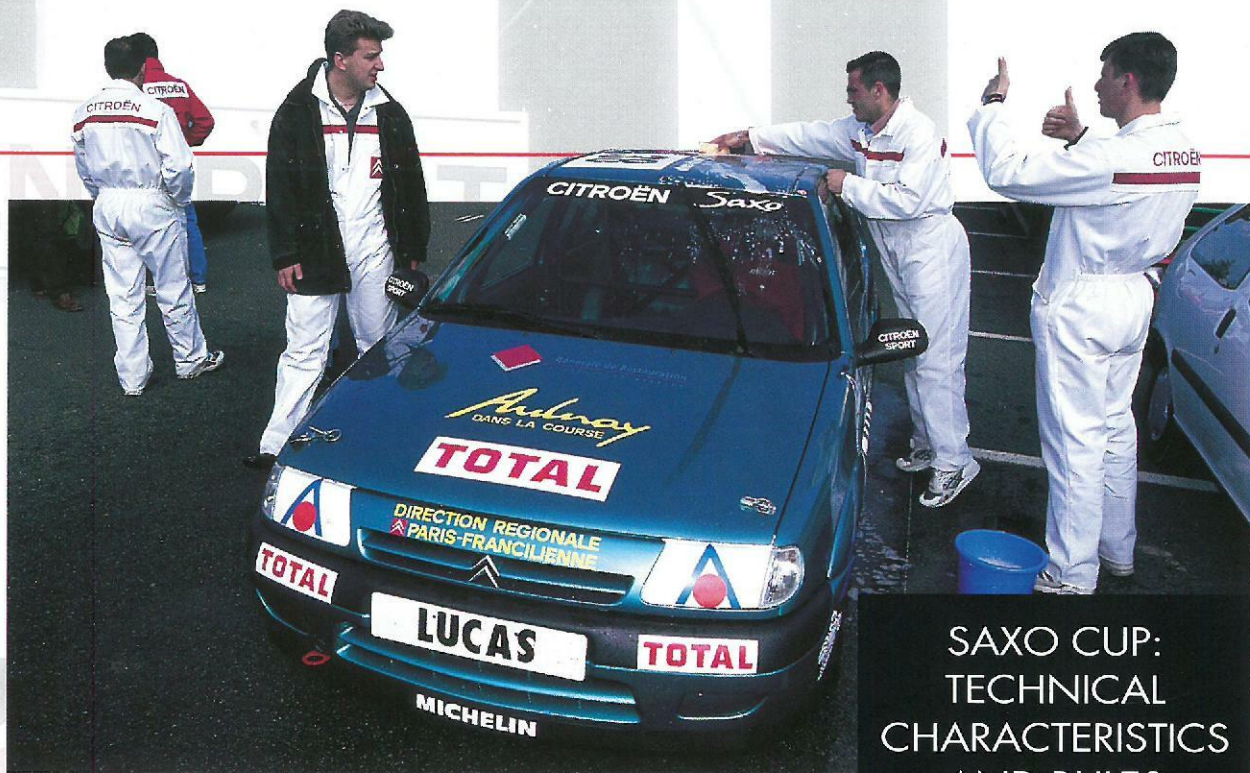
Marc Amourette

although he admitted it had taken him a while to come to terms with dosing the brakes. The team from Alençon's Mézen high school, regular participants in the AX Cup and led by headmaster Jacques Leroy (see Double Chevron no. 3), said they had been "bowled over" by the AX from the first test run. Nicolas and Laurent, the school's two drivers, confirmed that "with its road holding, power and speed the Saxo is definitely a real race car". During the qualifying laps it became clear that the car still needed some fine-tuning. That is what the mechanics were there for, though, so they burned the midnight oil and worked through into the early hours of race day to give the drivers the best possible car configuration. Their efforts certainly paid off as Laurent crossed the finishing line in 15th spot, seven places higher than his position on the grid. He explained: "I decided beforehand that I would try to keep up with the fastest cars on the track right from the start. If you don't, it is very hard to come up through the field. It was worth a few hairy moments during the race!"

Standing in front of his pistachio-green car after the qualifying round on Saturday 4 May, Marc Amourette seemed



Florence Perreau



SAXO CUP: TECHNICAL CHARACTERISTICS AND RULES

satisfied with his day's work: "The Saxo is a great car to drive and is bound to be the young people's car of the future". For his part, Jean-Marie Clairet, who invited the other drivers around for a snack on the eve of the race, declared the Saxo "a true race car". Cyril Kotylac came third in Sunday's big race, stating: "The Saxo is the best promotional formula I have ever participated in". Frédéric Ancel, the son of a Citroën dealer, stressed the Saxo's "predictability", which make it so much easier to drive."

Newcomers attracted by the Saxo

While the Saxo may have encouraged AX Cup drivers to stick with Citroën racing, it also exerted a strong pull on race newcomers. Guy Lecourt is Head of Promotional Formulas at the Communications department: "Citroën Sport has broken all the records this year, with 20 dealers taking part in the Saxo Cup, either sponsoring a driver or taking the wheel themselves". Indeed our dealers do appear highly motivated by this car which, as Sarrebourg dealer Claude Oblinger explains, "is representative of Citroën's sporty image". It is not just the dealers who are enamoured of the Saxo. Another new fan is Julien Pressac, the youngest competitor in the race at 16, though he admits "I still have a lot to learn". He points

out that this promotional formula also "offers a waiver for drivers aged 16 to 18." Florence Perreau, one of the two women drivers competing for the Saxo Cup, finds the Saxo "well-designed and a very effective race car". Florence, who had previously only raced in single-seaters, is aware of some weaknesses in her driving that she will have to iron out for the coming race season such as "dosing the brakes correctly and slowing down for the chicanes".

As it does for every race, Citroën-Pressé invited a journalist to take part. Eric Jarrigeon, a specialist car journalist, said it was a "fabulous" experience for someone in his profession to witness a race from out on the track: "Not least because this is a fabulous car. If it had not been so easy to drive I might not be here today!"



The Saxo Cup replaces the AX GTi Cup (1993-1995). It has the same objectives, defined by Pierre-François Rousselot, Head of the Customer Competition Department, as "enabling young drivers to participate in motor racing at a low cost and in the best possible conditions".

The Saxo Cup model is a standard Saxo delivered with a separate sports kit provided by Citroën Sport. It therefore retains the standard 4-in-line, 16-valve, 1,587 cm³ engine capable of generating maximum power of 140 bhp at 6,500 rpm. The rules prohibit reducing the weight of engine parts. Teams taking part in the Saxo Cup are required to use Total Super Premier SP 98 petrol and Michelin 18x56-14 S9A slicks or 18x56-14 TA00 wets. The Saxo Cup includes a women's race and a Citroën network cup open to the marque's dealers as well as local and regional branches.

Announcing the

WITH ITS PLEASANT LOOKS, PRACTICAL STYLE AND MULTI-PURPOSE CAPABILITIES, THE BERLINGO REVOLUTIONIZES THE CONCEPT OF LIGHT UTILITY VEHICLES. STAYING ONE STEP AHEAD OF THE REQUIREMENTS EXPRESSED BY DEMANDING PROFESSIONAL CUSTOMERS, THIS INNOVATIVE VEHICLE WILL APPEAR IN THE SHOWROOMS IN JULY. DOUBLE CHEVRON IS PLEASED TO TAKE ITS READERS ON A TOUR OF DISCOVERY.

The innovative style and pleasant curves immediately attract attention. Citroën's latest utility vehicle is a real eyecatcher. With its integral body - no divisive lines or protuberances - the Berlingo has a specific style and a distinct resemblance to a saloon or people-carrier. Available in two levels of trim and with four power plants - two petrol and two diesel - the Berlingo satisfies and anticipates the needs of particularly demanding professional customers in



Berlingo...

Europe. The M49 project was based on specifications drafted by the Marketing Plan/Programmes Division on the basis of customer studies and surveys. One survey asked drivers in France, Spain, Italy, Britain and Germany to dream up a small utility vehicle for the year 2000. "The people we spoke to expressed very precise requirements and gave us a clear basis on which to work," stresses Vincent Rebel, Product Project Head at Marketing Plan/Programmes. The M49

had to be functional, roomy, practical and robust, with an easily configurable layout.

As a result, the Citroën Berlingo marks a complete break with tradition in this segment of the market. It easily dominates rivals in the F segment with a payload of 800 kg, a modular length of between 1.70 and 2.10 m (with the multi-function seat folded down), a useful capacity of 3 m³ (one of the best in this class of vehicle) and a broad range of powerplants including

the 1.9 l diesel developing 71 bhp - one of the biggest and most powerful diesel engines in the F segment. These characteristics make the Berlingo a versatile vehicle, equally at home in the city and on the highway.

Developed in 196 weeks - in line with the principles of the Product Development Charter - under the authority of Richard Gilles, M49 Project Director, the Citroën Berlingo is manufactured at the Vigo production plant in Galicia, Spain.



THE OTHER F1

The F1 vehicle segment covers vans and similar vehicles with a payload of between 450 and 800 kg and a capacity of between 2 and 3 m³. Most of the vehicles in this category are window vans or raised panel estates. There is a big market in Europe for this type of utility vehicle. Last year, one light vehicle out of every four sold was a van, making a total of 314,000 new registrations. Five countries - France, Spain, Britain, Italy and Germany - sell large numbers of vehicles in the F1 segment and it seems likely that these markets will develop still further in the years to come. Historically, France is the European country with the highest volume of sales - 33% of the market at present. Four main carmakers currently dominate the European market, generating three-quarters of new registrations in Europe. They are Renault (29.2%), Citroën (19%), Ford (14%) and Opel (12%). The C15 is the second most popular model in Europe.

Putting on the style

With its pleasant looks and original styling, the Citroën Berlingo is a utility vehicle that immediately grabs the attention. At first sight, the rounded forms give a strong impression of a friendly and robust vehicle. The Berlingo is available in seven colours: Amiral Blue, Banquise White, Alep Green, Innsbruck Green, Furio Red, Scala Red and Quartz Grey. "Our aim was to keep the initial spirit of Bertone styling, while making a few modifications. For example, we rounded out the sides and added a gouged design line. That way the line combines fluidity with curves," explains Dan Abramson, Head of External Styling for the Berlingo project at the Citroën Styling Centre. "And to accentuate its pleasant looks, we curved the front end, the headlamps and the front and rear bumpers. Moreover, the generous thickness of the front and rear bumpers reinforces the overall impression of solidity. That's essential in a utility vehicle. Last, we focused particular attention on the assembly process. The aim is to obtain a homogeneous style, while accentuat-

ing the impression of quality and robustness. This result was obtained through computer-assisted design. At the start of the project, a team created a digitized image of the vehicle. We used that image to make sure we obtained a correct and homogeneous style," concludes Dan Abramson. With the chevrons on the radiator grille - like the



other cars in the range - and a ribbed bonnet, the Berlingo is immediately identifiable as a Citroën.

The comfort of a saloon

Comfort, convenience, volume and a generous load space... the Citroën Berlingo offers all the services expected of a utility vehicle, but in other ways it is more like a saloon. This becomes



BERLINGO: ENGINES AND FUEL CONSUMPTION

	Petrol					Diesel		
	475	600	600	800	600	800	600	800
Payload (kg)	475	600	600	800	600	800	600	800
Capacity	1,124	1,124	1,360	1,360	1,769	1,769	1,905	1,905
Maximum power	60 bhp at 6,200 rpm	60 bhp at 6,200 rpm	75 bhp at 5,500 rpm	75 bhp at 5,500 rpm	60 bhp at 4,600 rpm	60 bhp at 4,600 rpm	71 bhp at 4,600 rpm	71 bhp 4,600 rpm
Maximum speed (km/h)	134	140	150	148	135	135	144	144
Consumption (litres/100 km)								
• Urban	8.5	8.9	8.7	8.7	7.7	7.7	7.3	7.3
• Average	7.8	8.0	8.0	8.0	7.3	7.3	6.9	7.0

clear when looking at the range of equipment on offer, including ABS, air-conditioning, central locking, electric window-lifts, coat hooks and adjustable headrests. "The main idea was to design a passenger compartment that would be user-friendly, restful and in which the driver would feel as safe as in a saloon. We aimed to design an interior with class. That's why we paid so much attention to detail," explains Bob Matthews, Head of Interior Styling at Citroën's Styling Centre. "For example, we paid particular attention to the moulding, that means the trim and the wood covering. In the same way, the



rubber mat at the back took a great deal of time. The seats are identical to those found in a saloon but they have been modified for professional use. Covered with a high-resistance fabric, they are ergonomic and pleasant to touch. In functional terms, everything is in the right place so the driver can find his way around easily," he continues. This objective was reached thanks to the organization put in place as part of the Product Development Charter. "Each

of the four interior stylists responsible for the project took charge of a specific section: dashboard, seats, sheet metal and trim parts." Grouped around the project director, the stylists worked in association with the design engineers and manufacturers, individual functions overlapping as they worked towards their common goal: to design an interior that satisfied and anticipated the requirements of professional customers. "The Berlingo is light-years ahead of what we've seen in utilities up to now," explains Vincent Rebel. The interior of the Berlingo places the focus on capacity, but comfort and driving pleasure have not been forgotten. "As soon as the driver gets behind the wheel, he can appreciate the space all around him: generous elbow room, large windows, large doors, a higher seating position to provide more space in the rear part of the cabin," he adds. "One of the main comfort features is the higher driver's seating position. Moreover, the seat itself is the result of advanced ergonomic studies, and is designed to provide excellent back support". An undeniable asset for drivers spending several hours a day in their vehicles. But the main interior styling feature of the Citroën Berlingo is the wide, bright, spacious and ergonomic driver's station with its high broad windscreen and large windows on the doors at the front. To maximize user comfort, the engineers equipped this small utility vehicle with acoustically engineered floor pans at the front

and back to reduce noise. In this way the Berlingo offers low noise levels and excellent vibration control.

Versatile, functional and convenient

A workhorse for professionals, the Citroën Berlingo was designed to facilitate life on board. This aim is illustrated by the design of the dashboard, which resembles those of the Xantia and XM saloons and the Saxo. Ergonomic and functional, the dashboard blends in with the pleasant overall style of the vehicle and offers many convenient features such as two large storage boxes.

THE IDEAL SMALL UTILITY VEHICLE

Dimensions

- Overall length: 4.10 m
- Overall width: 1.72 m

Loading area

- Height: 1.24 m
- Length:
 - 1.70 m seat up
 - 2.10 m seat down
- Width max.: 1.60 m

Loading space: 3 m³

Glazed area

- Total: 239 dm²
- Windscreen: 114 dm²

THE MACI MODEL

Already used in the development of the Saxo, the MACI (Interior Inspection Model) helped Bob Matthews' team to give the Berlingo an interior design of flawless quality.

"To obtain the MACI, we prepared a numerical definition of the passenger compartment, smoothing out all the different parts. The model is a framework in which we can assemble all the constituent parts, including the graining of the interior, to obtain a 3D display of what the passenger compartment will look like in reality. With this model, we were able to monitor the design process up to industrial production and to thereby optimize the finish. The MACI provides us with a reference. And with the platform structure, we were able to maintain excellent communication links between all those involved."



The upper box is fitted with a lockable lid, whose inner lining is big enough to store pens and two 33 cl cans. The lower box is broad and deep. A cubby is provided on the top of the dashboard opposite the passenger.

Last, the driver can place a note pad on the steering wheel provided that the vehicle is not equipped with an airbag. Long, broad and deep cubbies are fitted along the bottom of the doors to hold documents and even a 1.5 l bottle. Designed to meet the needs of all professionals, whether they are self-employed contractors, delivery representatives or professionals from some other sector of activity, the Berlingo loading space optimizes access to the vehicle's useful capacity. Moreover, it is easy to modify the layout of the rear area according to requirements. But the main innovation is the multi-function passenger seat, which is available



on the 600 and 800 versions. The comfortable seat becomes a functional tool in just a few seconds. By tipping the back over onto the seat, the user gains access to a table designed to hold documents and a pen case. It is fitted with a strap and two recesses for drinks. Tipping the entire seat backwards reveals a large chest of approximately 0.1m³, which can be used to hide valuable objects from prying eyes. "The objective was to come up with a design that would be comfortable for both the



TESTS

Like all the new models developed by the marque, the Citroën Berlingo underwent a series of stringent tests - both virtual and real - prior to launch. As a result, the comfort, driving pleasure and active safety of the Berlingo are comparable to those of the marque's saloons.

These qualities are the result of extensive studies conducted by Citroën engineers and backed up by hundreds of thousands of kilometres of test drives. In addition, the endurance tests conducted on the different parts to verify robustness were up to two-and-a-half times more severe than those usually carried out on saloons. In all, 130 Citroën Berlingos - prototypes, pilot vehicles and pre-series models - were driven for 3 million kilometres.

THE HINGED REAR ROOF FLAP

Naturally, the Citroën Berlingo is equipped with a hinged rear roof flap, a feature that is vital for professional users. Pleasant to look at, like the vehicle itself, the roof flap is simple, convenient and easy to use. Modular and ergonomic, the rear roof flap is used in two or three steps during loading and unloading, with the doors open or closed. No specific tooling is required. Here again, everything has been done to meet user requirements, since the hinged rear roof flap is compatible with a roof bar or luggage rack.



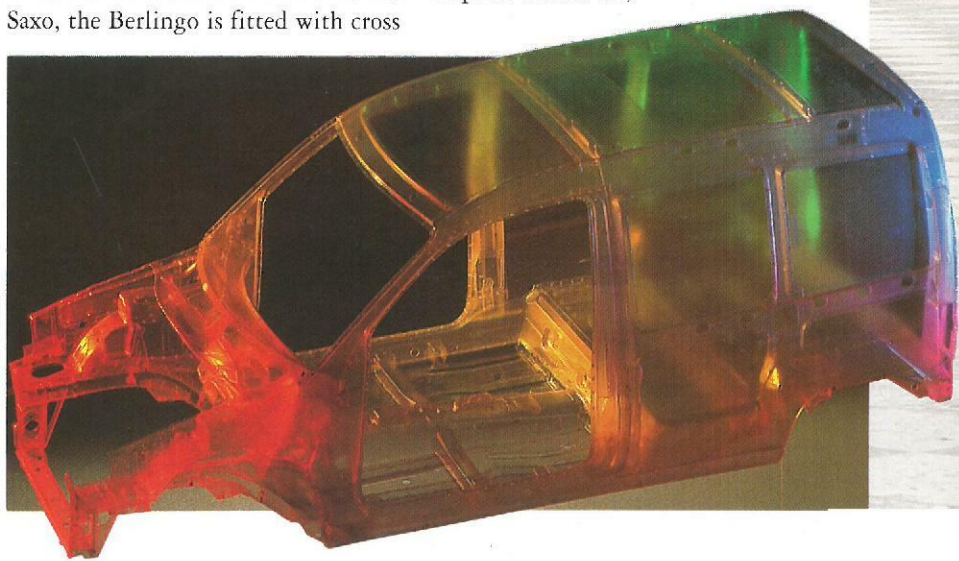
driver and the passenger" explains Bob Matthews.

A dynamic safety strategy

Like the marque's saloons, the Berlingo reaps the benefits of Citroën's experience and know-how in the field of active safety and passenger protection. First and foremost, the Berlingo boasts the dynamic qualities that typify the marque's other vehicles. In this way, it is able to handle difficult situations and act fast in an emergency in order to avoid an accident. In addition to its modern suspension system with four independent wheels, the Berlingo is equipped with anti-roll bars at the front and back to maximize comfort and safety by keeping the vehicle steady when it takes a corner. In terms of passive safety, extensive studies were performed on vehicle structure and protection

against side impact. Studied and analyzed using CAD techniques, the vehicle has programmed crumple zones at both the front and rear as well as a passenger compartment designed to provide a protective cell for the occupants in the event of an accident. Like the Saxo, the Berlingo is fitted with cross

braces and a safety hoop to stiffen the passenger compartment and thereby protect the occupants in the event of collision or roll over. In the same way, the doors are fitted with reinforcement bars to provide protection from side impact. Moreover,



Product

the high driving position minimizes the risk of injury. The safety of the Berlingo is improved still further by additional features such as pyrotechnic pretensioners on the seatbelts, anti submerging seats, load-restraint hooks and airbags.

All these qualities make this innovative vehicle an indispensable aid for business.



THREE QUESTIONS FOR CHARLES WASSMER

Head of the Marketing Strategy Division at the Marketing Plan/Programmes Division, Charles Wassmer talks to Double Chevron and explains why the Citroën Berlingo is revolutionary.

Double Chevron: What is the positioning of the Citroën Berlingo with respect to the competition?

Charles Wassmer: The advantage of this vehicle is that it is a new product concept, which is going to revolutionize the light utility vehicle market. The Berlingo combines the basic functions of the utility vehicle market - namely robustness, volume, functionality and convenience - with the new requirements currently emerging on this market, such as looks, versatility and comfort. Berlingo offers customers more services than before. It also has an unusual look since it borrows from other types of vehicle. Hence the resemblance to a small 4x4 or even a people-carrier. Moreover, the Berlingo is perceived as being more versatile and innovative than other vehicles on the market. The idea is to offer a full response to requirements expressed by customers interested in purchasing vehicles on this segment of the market and to import ideas from the saloon category.

DC: What are the strong points of the Berlingo?

CW: The cabin, the extremely comfortable driver's station that gives you the impression of looking down on the road, the multi-function seat that lets you work in comfort, and a design that makes it easy to get in and out. In terms of style, the integral body is a real revolution in this segment. This exploratory approach may pave the way for a version that places the focus increasingly on convenience, leisure and pricing, with a versatile and robust vehicle corresponding to current market trends.

DC: Why did you call it the Berlingo?

CW: Berlingo sounds light-hearted and friendly. Moreover, it ends in an "o", like other small innovative saloons. Berlingo is also a name that is easy to remember. Finding a name that has a strong impact and that sticks in the mind is a major condition for the successful launch of a new vehicle.





The Saxo rings the changes: diesel and fleet versions

At the beginning of May, Citroën launched the Saxo Diesel in three levels of trim: X, SX and VSX. All models are equipped with the TUD5 1,527 cm³ engine developing 42 kW. Aimed at younger customers who use their cars frequently, the new models offer a specific response to their requirements.

The Citroën Saxo Diesel combines comfort, driving pleasure, safety and versatility with an economic, flexible and efficient powerplant.

The Saxo Diesel offers a range of special features: colour-coordinated bumpers and door handles, side mouldings and tinted windows as well as pyrotechnic pretensioners and grabbers on the seat belts.

The Saxo fleet models were launched at the same time and are equipped with three engines: 1.0i and 1.1i petrol and 1.5 diesel.

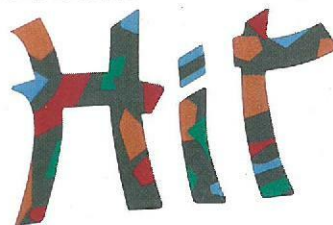
The AX Tonic packs a punch

The AX Tonic limited series was launched in May, at the same time as the equivalent version of the ZX.



Based on the 3- and 5-door versions of the AX Spot, the AX Tonic is equipped with TU9M and TUD5 powerplants, colour-coordinated bumpers, tinted windows, wheel embellishers and specific interior features: sports seats at the front, foam armrests. A total 5,650 units have been produced. The AX Tonic is available in Blason Red, Banquise White, Amatra Blue/Green and Amazonie Green.

The customized C15 is a hit



The C15 Hit, a customized utility vehicle, features a 1,769 cm³ diesel powerplant and is available in Banquise White. Launched in April, it offers a range of options to meet all requirements: power steering, a load stop - with or without a meshed screen - and an electric pack. A special "Hit" sticker gives it a distinctive air.

From the AX to the Proton Tiara

Mahathir Mohamad, Prime Minister of Malaysia, personally sponsored the launch of the Proton Tiara - a vehicle based on the Citroën AX - in a ceremony held on 5 April in Kuala Lumpur. Claude Satinet, Assistant Managing Director of Citroën, and



Bernard Terquem, Director of Citroën International, were also present at the event.



A day with the Saxo

EIGHTY CITROËN TRAINEES WERE INVITED TO BE GUESTS OF HONOUR FOR A SNEAK PREVIEW OF THE SAXO - THE MARQUE'S LATEST MODEL - AT THE PRODUCTION PLANT IN AULNAY-SOUS-BOIS ON THE OUTSKIRTS OF PARIS. DOUBLE CHEVRON ASKED ONE OF THE TRAINEES TO RECOUNT THE EVENTS OF A MEMORABLE DAY.

Eight o'clock in the morning in front of Citroën headquarters in Neuilly, the start of an exceptional day for us all. The launch of a new car is always a major event for the marque, and the unveiling of the Saxo was an occasion of particular note for the entire workforce. "We have

always been anxious that young people spending time with Citroën should really feel that they are part of the company," says Frédérique Loiseau, Head of Traineeships and Relations with Schools at the Human Resources Division. Matching the word to the deed, Mrs

Loiseau gave one of her own trainees, Claire Croisille, the task of organizing a guided tour for trainees working in other areas of the company. Her job was to combine a presentation and preview of the Saxo with a guided tour of one of the marque's final-assembly plants

Learning about the Saxo

The great day - 16 February - arrives and all eighty of us are eager to discover the programme for the day. First stop is the Villepinte exhibition centre, where we are welcomed by seven people all of whom play a strategic role in the production, sale or promotion of the Saxo.

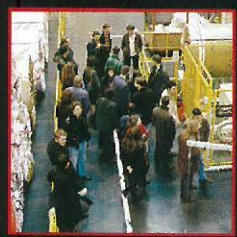




Claude Giroux, the manager of the Aulnay plant, explains that a production facility is a hive of activity. Aulnay has 5,700 employees including 4,700 to monitor and control production lines. Shouldering great responsibilities, all the members of the workforce pulled together for the project, which aims to produce 900 Saxos daily. A visibly proud Claude Giroux tells us

70,000 Saxos for sale!

Jean Heinrich, Saxo Project Manager, kicks off on a light note: "If it were up to me, I'd stay here and talk about the Saxo for the next two days!" The audience laughs. Teamwork between individuals and between functions constituted the backbone of the Saxo project. Jean Heinrich explains the three stages constituting a project. "First, a one-year preliminary stage to get the project started, then a four-year period involv-



that: "The track failure record was just 21 points during the first few weeks of production". Track failure? We gaze at each other blankly. Mr Giroux is kind enough to provide an explanation. "Track failure testing involves picking out several vehicles from the different production lines during the course of the day and noting any defects. The scoring system is 50 points for a minor defect and 550 for a major defect". Claude Giroux's allotted twenty minutes are already up and he hands over to Charles Wassmer, Head of the Design and Marketing Strategies Department at the Product Marketing Division. Claire Croisille's organization is clearly spot-on and the speakers are all careful not to overrun their specified time limit of

between 20 and 30 minutes. Charles Wassmer explains that the positioning of a new car on the market is actually decided three to four years before production begins! That's when we suddenly realize that while we're celebrating the birth of the Saxo, Citroën's styling specialists, designers and engineers are already hard at work on the automotive concepts of the future. "The marketing definition is fundamental. The product's identity must be clearly understood by all the members of the workforce as well as by the people Citroën works with outside the company." Charles Wassmer continues: "Next, we have to make sure that the way in which the product is expressed matches the advertising style".

ing extensive discussions with manufacturers. Any problems arising during this period have to be dealt with immediately before moving on. The final step is the production stage lasting 17 weeks." A major project indeed. Pascal Soland, the charismatic Head of Citroën Sales, France, is a man who clearly loves his work. His informative presentation leaves the audience enthralled. And his objectives are clear: "We must sell 70,000 Saxos in 1996. We can reach our goal because the car has fired the enthusiasm of Citroën's 10,000-strong sales network. Each and every member of the network was able to take the Saxo out for an unlimited number of test drives as part of the agreement put in place for the launch".

A peek at the Saxo advertising campaign

A welcome coffee break gives us time to mull over everything we have been told. We exchange viewpoints.

Lionel, a trainee at Aulnay's Quality Division, is happy to "learn about other activities". Marion, from Production, talks about the "global vision of the company" gained by listening to speakers from different divisions. Thierry, also from Production, is impressed by the "flawless organization and the attention given to trainees", a point on which we all agree!

We then return to the presentation hall



to listen to Olivier François, Head of Pricing and Sales Methods for Citroën Sales, Europe. He explains how "selling cars outside France demands a European strategy tailored to each country. It depends on the purchasing criteria of each segment of the population: range features, pricing and so on". He also believes in the importance of coordinating vehicle launches, by opti-

mizing information, developing co-ordinated schedules throughout Europe and combining the methods adopted on a common basis.

André Chérid, Head of Advertising at Citroën Sales, Europe, explains how "the aim of advertising is to set a product apart from its competitors". The slogan must reflect the car's marketing positioning yet also form part of Citroën's advertising strategy. The slogans used for the Saxo are: "Citroën Saxo, the car with inner strengths" followed by "Nothing moves you like a Citroën". A team of Americans made three adverts, one lasting one minute, and the other two 30 seconds each, all of them using astonishing special effects. We all turn our eyes to the screen to see the result. The longer version is screened first. Delighted by the upbeat scenario, the entire audience bursts into spontaneous applause.

Questions from the audience

The last person to take the floor is Frédéric Lepeytre, Head of Consumer Affairs at the Communications Division. He highlights the importance of presenting a vehicle to the press, since "the public forms its first opinion via the media".

After the speakers have finished, it is time for the question and answer session. The frank and open attitude shown by all those present encourages us to ask all kinds of question, such as where the name "Saxo" came from, its positioning as a

conventional/multipurpose car and the future of Citroën. We learn that names ending in "o" are more pleasing to the ear, that a short name sticks more easily in the mind, and that the letter "x" has a symbolic value for the marque. Citroën gave the Saxo a relatively classic design because it is attacking a new market and wants to make sure that it will reach as broad an audience as possible. As for Citroën's future, the managers assure us that the marque will be around for a long time to come!

Discovering the Aulnay plant



A copious buffet awaits us at the Aulnay plant, giving us time to enjoy a chat with the speakers in a relaxed atmosphere, before visiting the workshops where we are to watch the various stages of Saxo production "live". We have already started to form our own opinion of the new car. Michel explains: "I fell for it when I saw it displayed at Headquarters, but now that I've learned more about it I feel really motivated". We are split into three groups for a guided tour by the head of each workshop. Our visit takes us to the stamping shop, the body assembly shop and the





TRULY PART OF THE COMPANY

Every year, the different Citroën units welcome almost 1,500 trainees from a number of different academic backgrounds. Frédérique Loiseau, Head of Traineeships and Relations with Schools at the Human Resources Division, explains the marque's approach in this area: "Trainees are chosen from a pre-recruitment standpoint. Citroën is anxious to "stimulate young peoples' interest in the company, to show them a wide range of skills, to motivate them - and to make them want to work for the marque when they qualify. Our priority is to get them actively "doing" as opposed to just passively "watching" events in progress". As a result, the staff responsible for supervising trainees starting out in the working world are instructed to encourage their charges to accept responsibility in their work. Claire Croisille, who is working with Frédérique Loiseau for three months, is delighted to have been given the task of organizing the visit to Aulnay, "though I could always ask for advice". Similarly, Vincent proudly explains that he has "a true role" and is aware of the responsibility he bears.

final assembly lines. Wearing protective goggles and equipped with headphones to follow our guide's commentary, we gaze at the scene around us, wide-eyed with amazement.

It all seems so astounding: the vast workshops with their streamlined production processes are a long way from anything we had imagined. To tell the truth, the plant looks more like a laboratory than a factory. The guide explains that each individual holds a share of responsibility and everybody plays a role in keeping the place clean.

We are fascinated by the size and power of the presses. A robot supplies them with sheets of metal that they crush under their vast 400-tonne weight in order to obtain a precise shape. We feel infinitely small and puny, looking at the constant, synchronized movement of these vast powerful machines.

In the body assembly shop, we stop to admire a robot fitting a dashboard by putting its "arm" through the front of the vehicle with uncannily human gestures. Just as impressive is the next robot in line, whose job is to fix the front and rear windscreens. The precision of their movements, each one calculated down to the last millimetre, is like nothing we have ever seen before.

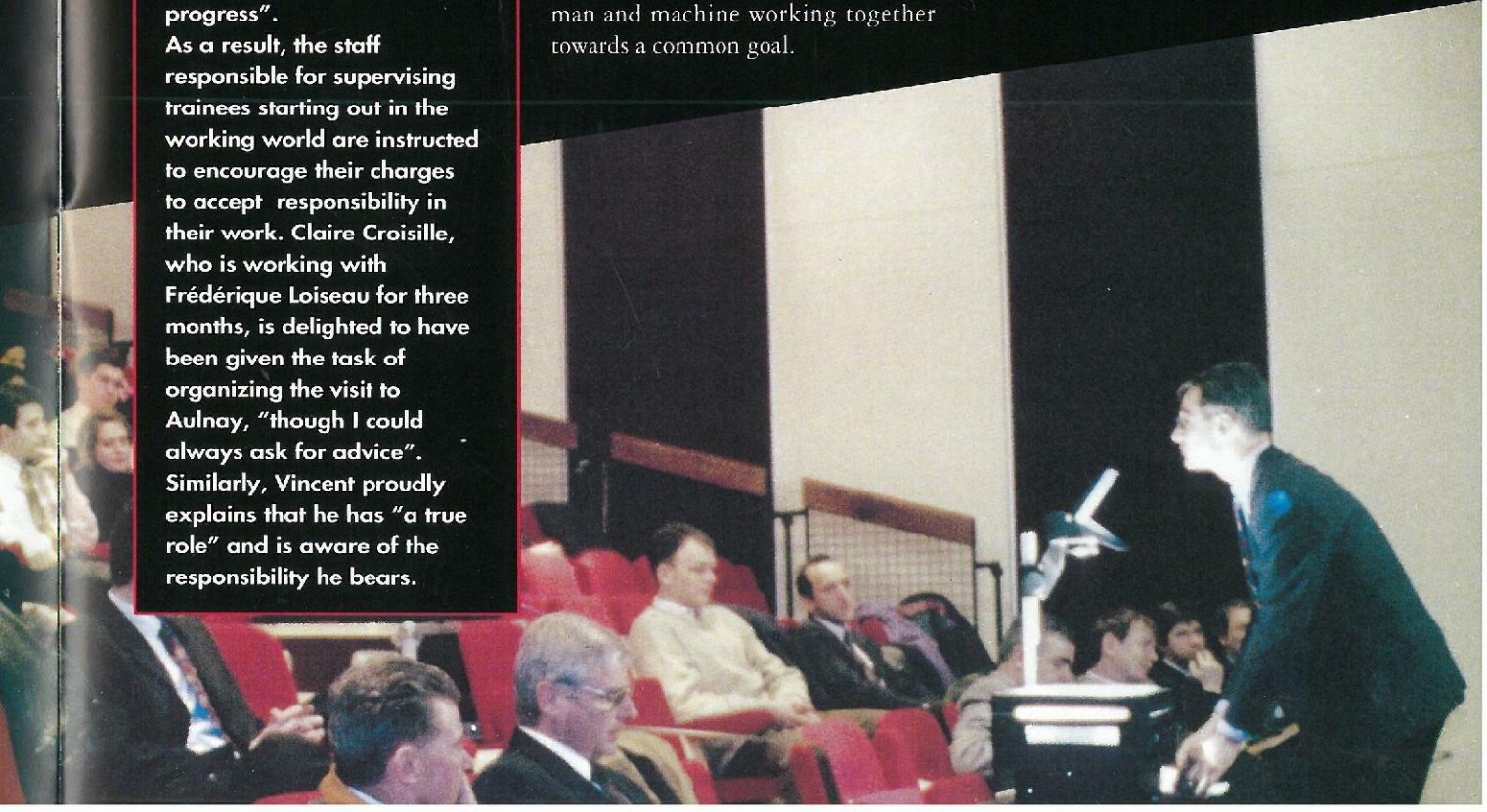
Thousands of people use the walkways criss-crossing the shopfloor but the place still seems calm. The overall impression gained by the spectator is one of man and machine working together towards a common goal.

The only part of the plant that we are unable to visit on the tour is the paint shop. There are too many of us in the group and the paint shop operators cannot run the risk - no matter how small - of contaminating the environment with particles of dust. One of the group marvels that "a roll of sheet metal can leave the plant at the end of the day in the shape of a car".

The time is 5:00 p.m. and we are all absolutely exhausted. Fortunately, cold drinks are on hand for immediate refreshment. Mini-questionnaires are handed out to all the members of the group so that we can note down our comments. Frédérique Loiseau and



Claire Croisille are quick to explain that we can hand them in another day, but we are all far too eager to give our opinion there and then. Proof indeed for the organizers of how successful the operation has been. This impression is confirmed by the results of the questionnaires: 70% of the group feel that the day has been "excellent".

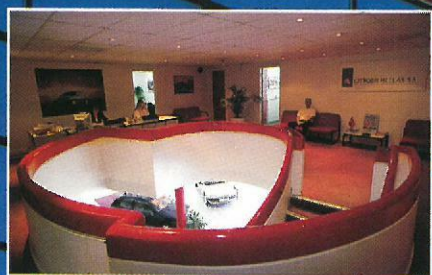


CITROËN ΕΛΛΑΣ

ON THE SACR

CITROËN IS THE LEADING FRENCH CARMAKER IN GREECE, RANKING NUMBER ONE IN BOTH THE M1 AND M2 SEGMENTS. DOUBLE CHEVRON VISITED A COUNTRY STEEPED IN HISTORY AND MYTHOLOGY.

A 5,000 m² glass building on the edge of the only road that linked the Peloponnese to the Acropolis in ancient times - Iera Odos, or the Sacred Way. We are at the headquarters of Citroën Hellas, sole representative of



R ED WAY

Citroën in Greece. Looking at the results obtained by the Synghelides family and their network over the past 25 years, it seems only natural that the marque should be based in a place that has seen so many other exploits in the past. The leading French carmaker in Greece, Citroën Hellas totalled a market share of 5.4% in 1995 on a total market of 125,430 vehicles. The target for 1996 is 6% on a market estimated at 140,000 vehicles. This excellent result owes nothing to chance. It is the result of teamwork and the wise management of the four members of the family. "Our role is to plan for the future," declares Paul Synghelides, one of the sons sitting on the Board of Directors. A statement that is worth its weight in drachmas considering the current difficulties of the Greek car market: the bonus for scrapping old cars no longer exists and car owners are required to pay a consumption tax based on the engine capacity of the vehicle.

"We must support the network until the tax is abolished. That should happen around the year 2000," explains Paul



Synghelides. "The other carmakers have to do the same. But if we look at the results, it seems that Citroën Hellas is having more success." Indeed. Reinvesting all profits, Citroën Hellas is giving its network all the support it can muster. It provides financial support when necessary and it has also set up a dynamic policy of intensive internal and external communication. "Communication isn't just a theory for us. We put it into practice," says Paul Synghelides. The proof is that

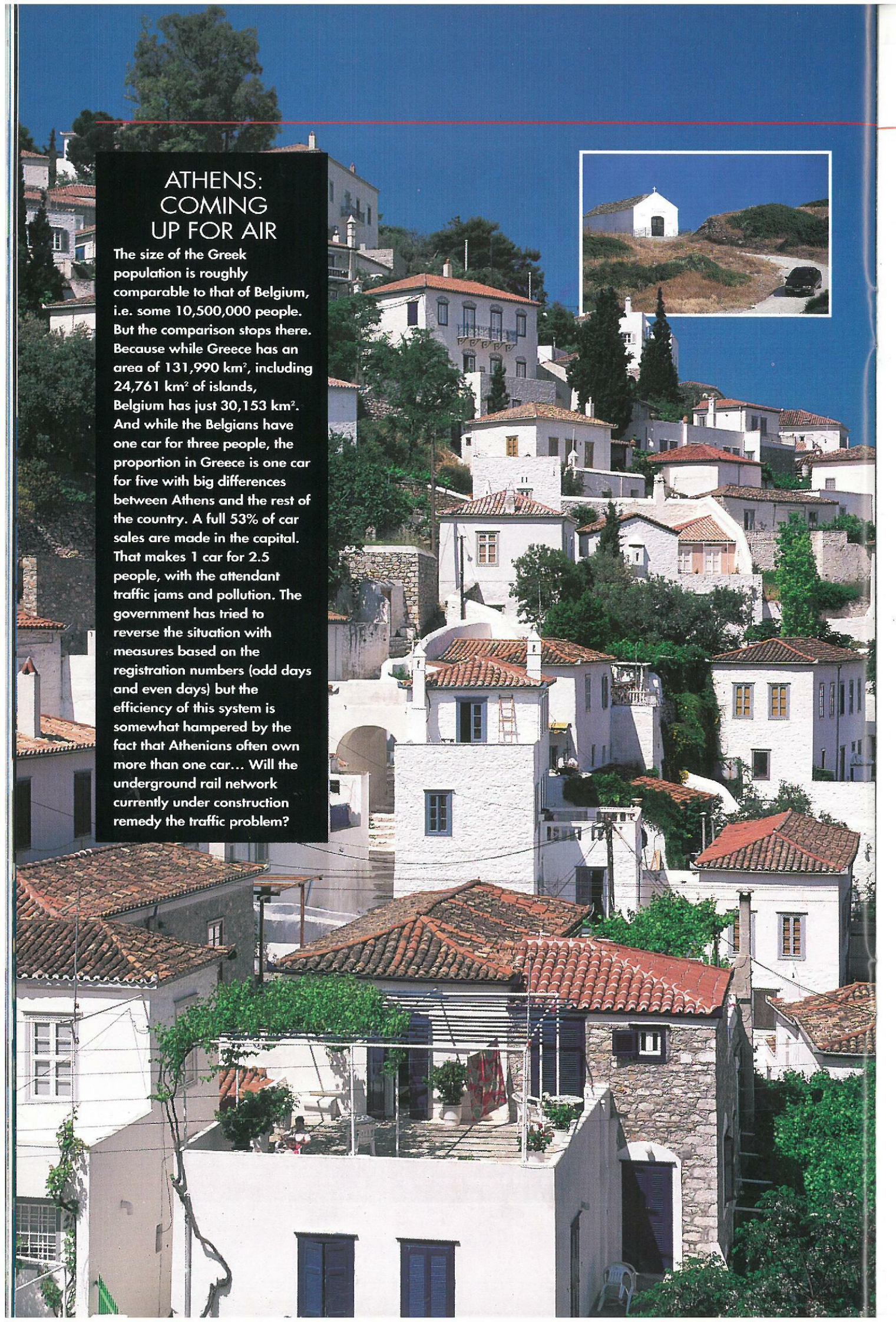
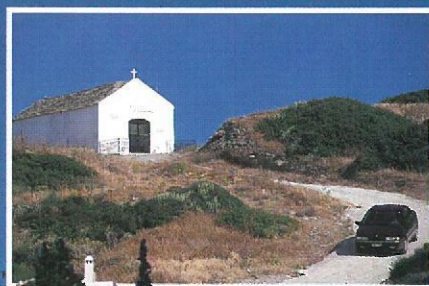


A TAXING SITUATION...

The introduction of taxes on new cars - and then later on used vehicles - at rates that were raised and lowered in succession (or at the same time), the bonus for scrapping old cars and the consumption tax on capacity have all had a significant impact on the Greek market since the 1980s. Another factor is vehicle age. The cars on Greek roads are ten years old on average. That is more than in most other European countries. In 1995, however, consumers were offered the possibility of taking out a bank loan for a car. Interest rates went down and consumption rose as a result. Nevertheless, two issues remain: first, the European Council has asked Greece to align import taxes on used cars and this could affect pollution control and sales of new cars; second, nobody knows exactly when the consumption tax will be abolished.

ATHENS: COMING UP FOR AIR

The size of the Greek population is roughly comparable to that of Belgium, i.e. some 10,500,000 people. But the comparison stops there. Because while Greece has an area of 131,990 km², including 24,761 km² of islands, Belgium has just 30,153 km². And while the Belgians have one car for three people, the proportion in Greece is one car for five with big differences between Athens and the rest of the country. A full 53% of car sales are made in the capital. That makes 1 car for 2.5 people, with the attendant traffic jams and pollution. The government has tried to reverse the situation with measures based on the registration numbers (odd days and even days) but the efficiency of this system is somewhat hampered by the fact that Athenians often own more than one car... Will the underground rail network currently under construction remedy the traffic problem?



Citroën Hellas has spent more on PR than any other carmaker since 1993.

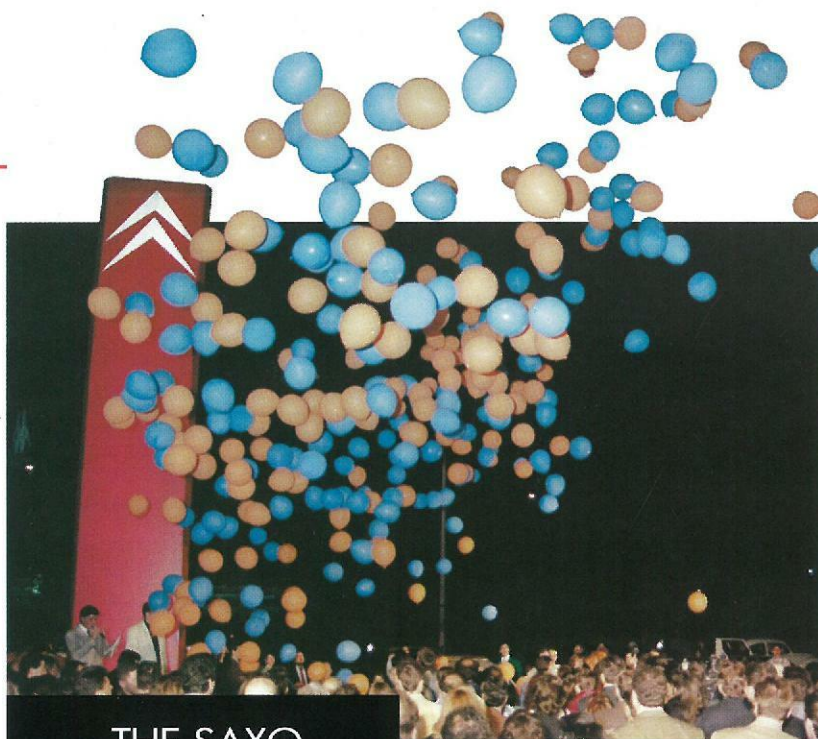
Just-in-time

The shrewd strategy of the Synghelides family, coupled with an extremely efficient organization, has brought results in the right place at the right time. When the trade-in bonus was still available, Citroën Hellas took decisive action in the M1 segment, where Japanese marques are traditionally strong. By offering many different special series with an increasingly varied range of equipment, the marque made the ZX the leader in its segment. Drawing upon the victories of the ZX Rallye Raid in the Paris-Dakar race, Citroën Hellas intensified its advertising campaigns, communication being vital in a segment where loyalty to a marque is virtually unknown. Six months after its launch in Greece, the Citroën Xantia also rose to the head of its segment. Whereas other marques tend to stress price and equipment, Citroën's cam-



paign stressed the vehicle's image and its technology. The strategy paid off. The Xantia now holds approximately 20% of the M2 segment (upper middle-of-the-range), and has won over many top-of-the-range customers. "Our car is the best all-round model," explains John Charonidis, Marketing Manager. "The Xantia has pushed up sales volumes in the M2 segment. The objective now is to make sure that it stays in first place, despite fierce competition from the Rover 400, a car that falls between the M1 and M2 segments. The Rover is locked in battle with the Xantia and the main weapon is the consumption tax."

This tax naturally benefits the lower segments of the market. Small cars hold a full 41% of the Greek market. The main rivals of the Citroën AX, which has a market share of 3.3%, are the Fiat Punto and the



THE SAXO IS HERE

This was the slogan chosen by Citroën Hellas to launch the Saxo at the end of April. A simple, factual slogan, contrasting with the approach generally adopted by the competition, and which invited customers to come and see the Saxo for themselves. Organized by John Charonidis and his team, the launch strategy comprised two phases: one national (TV, newspaper, magazine and radio ads) and one local (flags placed around the town as a teaser, decoration of sales outlets, unveiling of the car). Naturally, the journalists, network and personnel received extensive information beforehand in various forms, and were able to take the car out for a test drive.

The campaign reflected the usual approach of Citroën Hellas, in that all aspects were analyzed, validated and checked before being put into practice. This well-oiled organization makes sure that the marque is in complete control of all operations in progress around the country at any time and that all the information supplied is consistent throughout the network.

Volkswagen Polo. With special low-price offers and the launch of an extremely popular special edition that now accounts for 50% of sales - the AX Smart Sport - Citroën Hellas has turned in a good performance and has made significant progress in building customer loyalty pending the launch of the 5-door Saxo. That is the event everybody's waiting for. The 3-door Saxo was launched on the Greek market at the end of April. As this segment is dominated by 5-door models (60% of the B segment), Citroën Hellas is expecting the 5-door Saxo - due to be launched in September - to boost sales and market share. Already perceived as "a chic little French number", the Saxo looks well able to satisfy the hopes of Citroën Hellas.

Teamwork

Paul Synghelides and Jean Synghelides, Director of Citroën Hellas, describe the profile of the ideal Citroën dealer: "Young people with the drive to sell and who are also interested in after-sales, because that's the factor that will make the difference and help them to sell more cars."

The network, which enjoys the full backing of Citroën Hellas, comprises 65 sales outlets and service points. It is split into three areas - half of Athens and western Greece, the other half of Athens, central Greece and the islands, the north with Salonika (2nd biggest city in Greece and 12% of sales). These areas are supervised by Regional Assistants. "People with a finger on the pulse of the automotive industry and the ability to communicate, who know the products inside



Giannis Merkourakis dealership



Giannis and Apostolos Chaniadakis dealership



Dimitris and Andonis Kiriakopoulos dealership

DEALERSHIPS: RISING TARGETS

The sales outlet run by Dimitris and Andonis Kiriakopoulos occupies a strategic position near Athens airport. It is a 3,000 m² building comprising an underground workshop, a bright and welcoming ground-floor showroom and two floors of offices. Built in 1979 and renovated in 1993, it will shortly be extended when a new sales outlet opens a few kilometres away. This should enable the Kiriakopoulos brothers to double their targets in 1997.

In 1996, the target is 400 new vehicles, mainly middle/top-of-the-range cars, in line with the profile of customers in this area.

"The launch of the Saxo was a success. We think that it will become the second most popular vehicle here. But we're impatient for the launch of the 5-door model."

The secret of success for Dimitris and Andonis Kiriakopoulos? After-sales service. "It's vital for building customer loyalty." Thirty people out of a total of 36 spend all their time on this activity. Though it must be pointed out that 35% of the cars sold are second-hand.

"Citroën is a good marque. It owes its popularity in Greece to the strategy set out by Mr Synghelides. He's really got the Citroën bug."

And so have the dealership personnel apparently since most of them have been here for 12 years, and in some cases 20.

In a bustling district of western Athens, Gianni Merkourakis welcomes us to a building currently being extended and renovated.

"We didn't sell any Citroëns ten years ago round here," he explains. "Today, with the help of Citroën Hellas, we're achieving good results. Our target is 380 cars. We hope to double that when the renovation work is complete." Most

of the customers in this area are middle-class and most sales concern the ZX and - today - the Saxo.

For Gianni Merkourakis, the main concern is service quality, linked to the quality of the product and that of personnel. It owes its main success to the excellent relations it maintains with customers. "When the customer has a problem, he comes to the sales outlet to find an answer." The dealership is open between 9 a.m. and 9 p.m. "In Greece, the shops close at midday, but Citroën Hellas is always open for business!" The workshop makes it possible to build customer loyalty. It is a highly profitable business, generating some 140 million drachmas in sales. In contrast, the accessories market tends to be limited since cars are well equipped when they are sold.

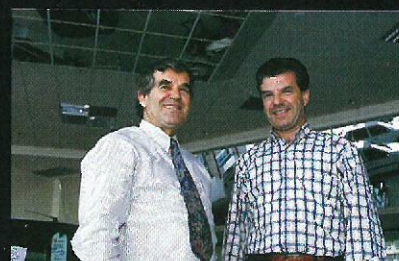
Apostolos and Gianni Chaniadakis also run a dealership in the western part of Athens. In 1995, they won the medal as best Citroën Hellas sales representatives for the third year running. An achievement that they owe to a policy based on test drives, promotional campaigns and the sponsoring of a range of activities including fashion shows and also AX and ZX competitions. The marque's victories have boosted its reputation among young people. Citroën dealers since 1990, the Chaniadakis brothers consider themselves as competing with their own sales force. Competition is thus more than just a word in this business. With a workforce of 35 people, including 26 for after-sales, the Chaniadakis brothers are pursuing a target of 700 new cars a year, not forgetting the second-hand cars that account for 45% of overall sales and are considered as a means of winning new customers.



Giannis Merkourakis



Apostolos and Gianni Chaniadakis



Andonis and Dimitris Kiriakopoulos

out and who can explain the difficulties encountered by the network to Citroën Hellas," explains Léonidas Mathiopoulos, Sales Manager. "With all the advertising and promotional campaigns, there's always something happening in the region. Before doing anything, the dealer must obtain the agreement of the Marketing Department of Citroën Hellas, which also finances advertising in regional media - content being renewed frequently - and manages all the equipment necessary for advertising and promotional campaigns at the sales outlets. "The objective of Citroën Hellas," continues John Charonidis, "is to offer a high level of service, both to the network and to customers". To this end, the marque conducts studies and tests, invests in new technology, trains the network and helps create team spirit and a dynamic management style among the 140 people working at headquarters. The entire network is being computerized (see box) and a computer training workshop is to be set up at headquarters.

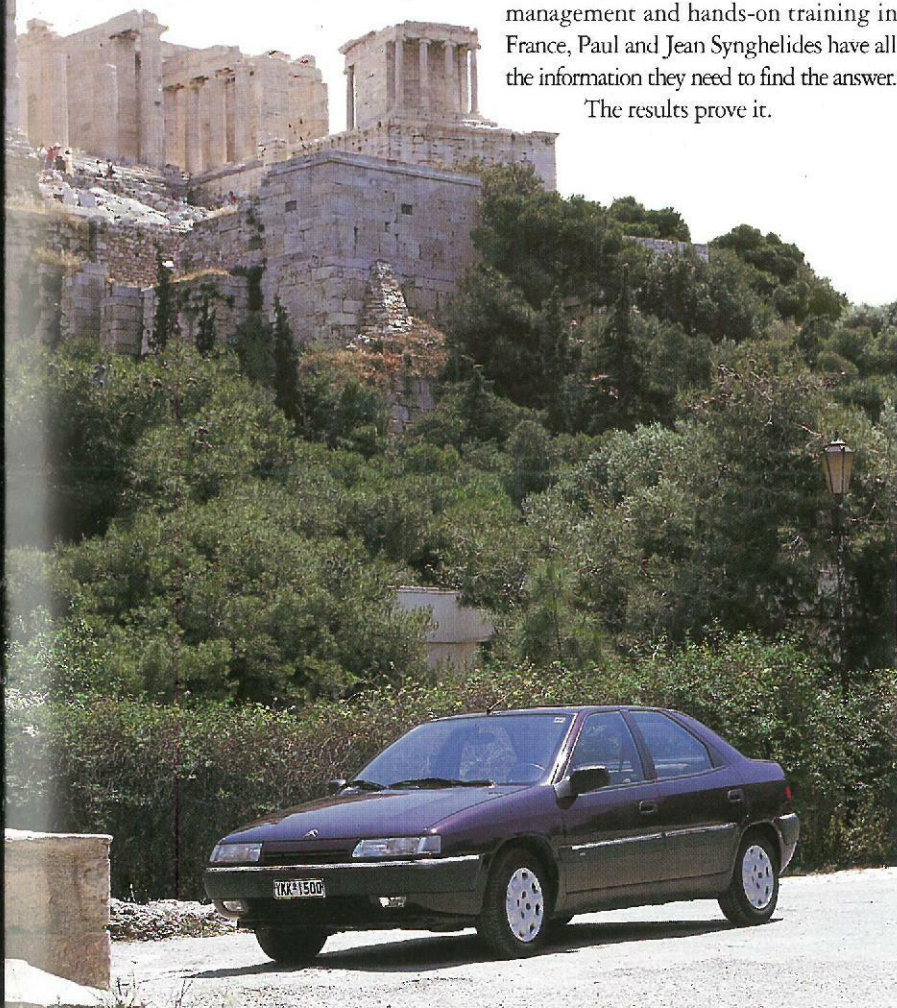


Each member of staff has already received some 200 hours of training in a special computer training room. In short, nothing is left to chance. "We must have a vision of the future," explains Paul Synghelides, "and to that end, we must support the network and constantly ask ourselves: what is the best way to plan for the future when we consider the range currently in preparation?" With a degree in economics, an MBA in management and hands-on training in France, Paul and Jean Synghelides have all the information they need to find the answer.

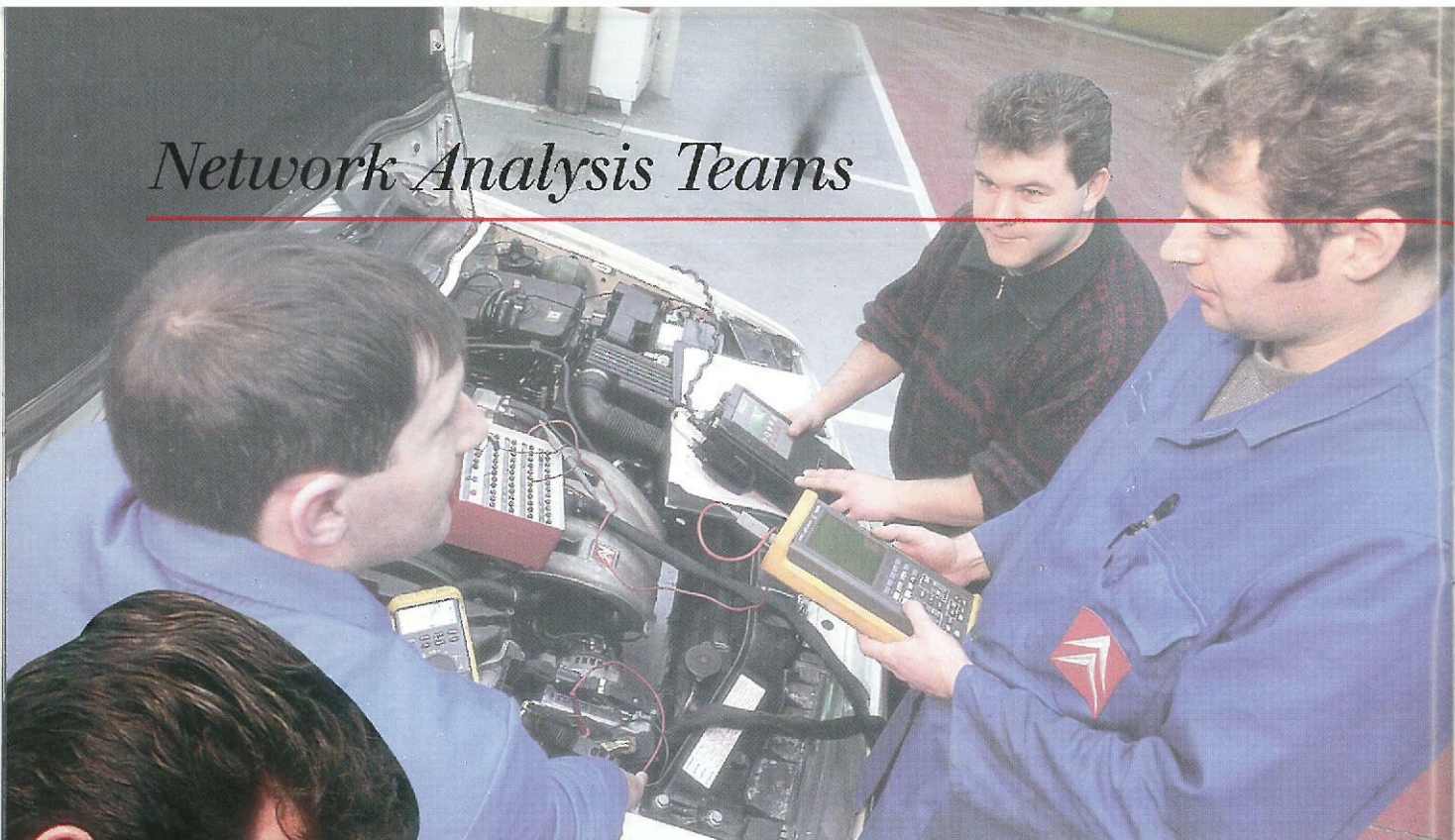
The results prove it.

A FEW ONGOING PROJECTS

Citroën Hellas is currently computerizing the sales and communication functions of its network in order to improve management of orders, stocks, service and spare parts - and also to promote dialogue. This initiative carries the name of "Dealernet". Still on the subject of innovation, Citroën Hellas is currently developing a new card in partnership with a bank. Working on the same principle as a Visa credit card, and with the same advantages, the card will also offer that extra something that is the hallmark Citroën Hellas - in this case, an up-to-date record on each car. Given to buyers of new cars, the card will be used for all operations performed at the sales outlet. The advantages are clear: continuous monitoring of all workshop operations conducted on the vehicle in any part of Greece. What a great idea! Another project: Citroën Hellas plans to equip the entire network with CD-ROM drives so that customers can obtain up-to-date information on the Citroën offering. In the short term, a site on the Internet is a definite possibility. Sixty thousand Greeks are already surfing the Net and all computers purchased in Greece offer Internet access. A total 200,000 computers are installed every year.



Network Analysis Teams



& Quality speed

SET UP IN 1993, THE NETWORK ANALYSIS TEAMS ARE AT THE CENTRE OF PRODUCT QUALITY. THEIR JOB IS TO INVESTIGATE "CUSTOMER VEHICLE INCIDENTS".

THE TEAM MOTTO REFLECTS THEIR OBJECTIVES: "RAPID ACTION FOR ACCURATE ANALYSIS".

Like a specialized rapid deployment force, the role of the Network Analysis Teams (NATs), is to track down all incidents on customer vehicles. Identifying the cause of such incidents in record time, they immediately inform all the departments involved in improving customer service quality. There are six NATs, - four in France (Lyons, Metz, Rennes and Saint-Denis), one in Spain (Madrid) and one in Britain (London). Originally set up for the launch

of the Citroën Xantia, they are based directly at branch offices, as close as possible to the customers and their vehicles.

Tracking defects wherever they occur

"Automotive design has advanced in leaps and bounds in recent years, and it is very rare now to see recurrent vehicle defects," points out Frédéric Parienté of the Quality and Organization Division (DQO). "Today, however, vehicles are becoming

increasingly complex and any incidents must be looked at from a global perspective. Moreover, customers are becoming more demanding; the NATs enable us to understand their needs and to satisfy them more fully."

Every month, the NATs receive a list of vehicle defects whose cause is unclear. This list is based on reported incidents concerning vehicle quality (letters from customers, repair costs for vehicles under warranty, customer surveys, information sent by dealers and subsidiaries, etc.). On the basis of this list, the analysis teams inspect the faulty vehicles, examining every detail until they identify the cause of the problem.

For Alain Dublé, who heads the team operating from the Saint-Denis-Pleyel branch outside Paris, the main advantage is that "the analysis teams are able to study the environment of the incident". This refers to what analysts call incident "context", in other words, the conditions under which the problem first arose on the vehicle. Before the NATs were set up, the Quality departments usually only received the defective part or unit, so it was difficult to discover the cause of the fault. Now, the analysis teams see the whole car and, if the defect concerns noise or driving pleasure, they can try the vehicle themselves and see where the problem lies.

Moreover, since the specialists have direct access to the vehicle, they are able to

examine the full reality of the incident, without being misled by second-hand information. "We deal solely with facts here," explains Thierry Rouillier, an electrician on the Saint-Denis team. "I used to work at the production plant in Rennes. It's totally different here. I can see how the car and its parts react after being driven by a customer. Today, for example, we have a car with abnormally high fuel consumption. We're going to test it to find out what's wrong."

As a general rule, the NATs are not in direct contact with customers. However, sometimes the incident is linked to a spe-



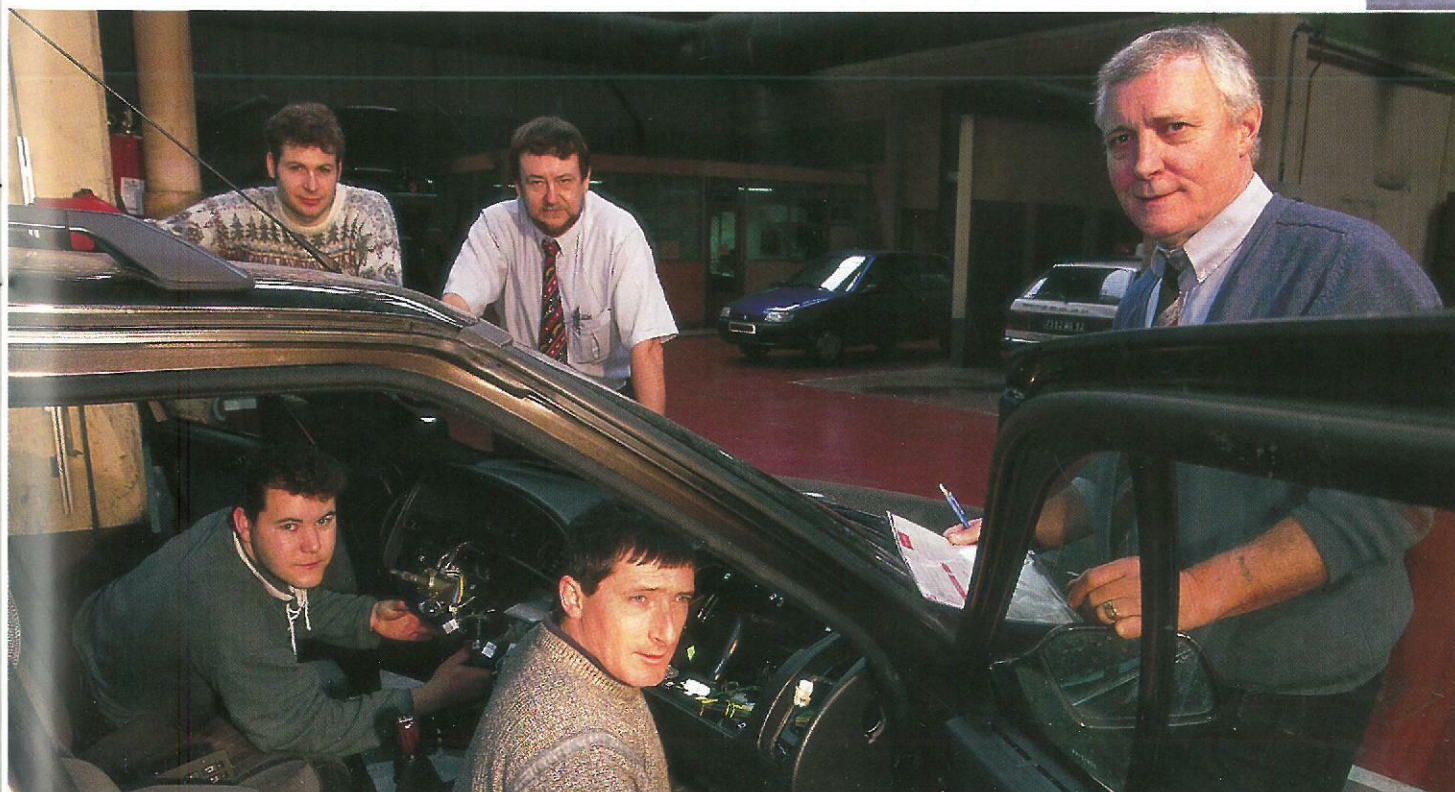
cific action or event that only the customer recognizes and that the specialists are unable to reproduce in their workshops. In this case, the analysts offer to accompany customers while they drive their car, along their usual routes if necessary, in order to reproduce the exact conditions in which the incident occurred. Here, the analysis teams have a dual role to play. Firstly, the fact that specialists

are available to handle customer problems "has a direct impact on customer satisfaction", explains Hervé Rouvrais of the Saint-Denis team, who is conscious of the importance of his work. Secondly, these methods go right to the heart of the problem, and serve to make a precise and accurate diagnosis of the incident. This approach also provides an opportunity to advise customers about their driving habits. For example: "A recent case concerned a taxi driver who complained about his vehicle suspension. We went out with him and discovered that he was driving much too fast on poorly maintained roads," explains Alain Dublé.

A team of specialists

The NATs each comprise one team manager and three or four analysts selected for their specialist knowledge in electricity, mechanics or bodywork. Their job is to track down the random and unpredictable incidents liable to occur in the life of a vehicle. "There are three stages in processing a defect: we analyze the problem, we find a solution and then we implement that solution on an industrial basis," explains Frédéric Parienté. "The NATs are involved in the first stage and their analysts have expertise in all our techniques and products. Everyone trusts their diagnoses."

The analysis teams examine the defect from every angle in order to obtain a clear





THE CUSTOMER INCIDENT REPORT



identification. Once the cause has been identified, the part or unit thought to be defective is replaced by a new one to make sure that the team's diagnosis is correct. Once this has been done, an "after-sales" repair is performed so that the vehicle can be returned to its owner without delay. The same operation is performed for other customers whose vehicles suffer from the same defect. The process of analysis takes between several hours and several days, during which time the owner is loaned a replacement vehicle. This system illustrates Citroën's proactive stance on quality. It also offers the marque a dual advantage: it eliminates defects once and for all and it provides valuable feedback for future reference, since all incidents are recorded and classified. It is also a testimony to the meticulous and thorough working methods of Citroën technicians assigned to the NATs to identify the cause of vehicle defects.

Continuous progress

The ultimate objective of Citroën's quality policy is naturally to satisfy each and every customer. The marque aims to rank among the world's top three in terms of product and service quality. The Quality and Organization Division has four key priorities. The first is design quality, an area in which the Product Development Charter has an important role to play. The Charter seeks to maintain tight control over quality and costs and to cut development times. To this end, each new vehicle is incorporated into a "project" running from the initial design sketches up to delivery to the customer. The second priority is production quality. This is illustrated by the system of demerits handed out to vehicles that fail to meet visual criteria when inspected at various

After examining a vehicle on which an incident has occurred, each analyst draws up a Customer Incident Report. This report is sent to all the departments responsible for improving quality.

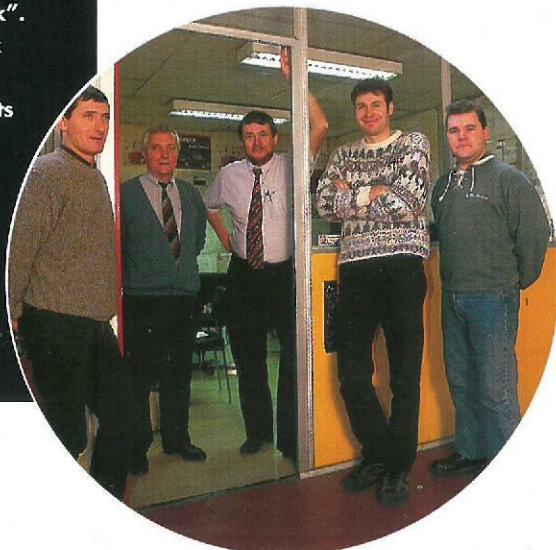
The report comprises several sections: a summary of the customer's complaint, the findings of the team and, if applicable, proposals for after-sales repairs and modifications to all similar vehicles on the production line.

The report includes a written section illustrated by drawings and photos of the defective part or unit and a number of appendices. It is drawn up in a professional manner, readily understandable by all readers. This calls for particular efforts on the part of the analysts since, as Thierry Rouillier points out, they are all aware of the fact that "the Customer Incident Report represents the culmination of their work". The Saint-Denis Network Analysis Team produces around thirty such reports each month. However, not all incidents are written up in this way, especially when they have been seen before and corrective action has already been taken in the production plant.

stages of production or that do not come up to standard when driven on the test track prior to delivery. Third and fourth come service quality and after-sales quality, concepts in which the NATs play an essential role. These teams are an illustration of the marque's determination to make continuous progress on all fronts. The NATs are an essential component in the system of information feedback and fault diagnosis, and their findings are considered to be of fundamental importance, since they provide the key to defining a solution. In this way, the last link helps bring about improvements in the first link of the chain, thus closing the quality loop. Once detected and corrected, a defect must never reappear, either on a production model or in a new vehicle design.

The short-term objectives of the Quality and Organization Division include setting up a mobile Network Analysis Team at head offices in Neuilly. This initiative will complement the other measures taken to reach Citroën's ambitious objective: to become one of the three most popular marques.

The members of the NAT team based in Saint-Denis-Pleyel. From left to right: Thierry Rouillier, Jean-Pierre Giovanni, Alain Dublé (head of team), Hervé Rouvrans, Eric Ronsierlemé.



Edouard Molinaro

Looking for action

Edouard Molinaro was chairman of the 7th Valenciennes Festival of Action and Adventure Films, which ran from 26 to 31 March. Citroën's regional division in Lille joined forces with the marque's Valenciennes subsidiary to place a fleet of ten Citroën Evasions at the disposal of the organizers. Before leaving for the festival village in an Evasion, Edouard Molinaro met the Double Chevron team in the hotel dining room.

Double Chevron: Your latest film, *Beaumarchais, l'Insolent* is a big hit in France. What made you choose the character of Beaumarchais?

Edouard Molinaro: A little over two-and-a-half years ago, I discovered a play by Sacha Guitry that had never been staged. That prompted me to read some of the biographies written about Beaumarchais. I soon realized that even though he was a famous author, nobody really knows much about him. We're all familiar with his two main works, *The Barber of Seville* and *The Marriage of Figaro*. But Beaumarchais himself was a story-

book character, a revolutionary who threw himself into many different activities and who loved life passionately. Yet he's largely unknown to the general public. I tried to make an entertaining film that would make people want to know more.

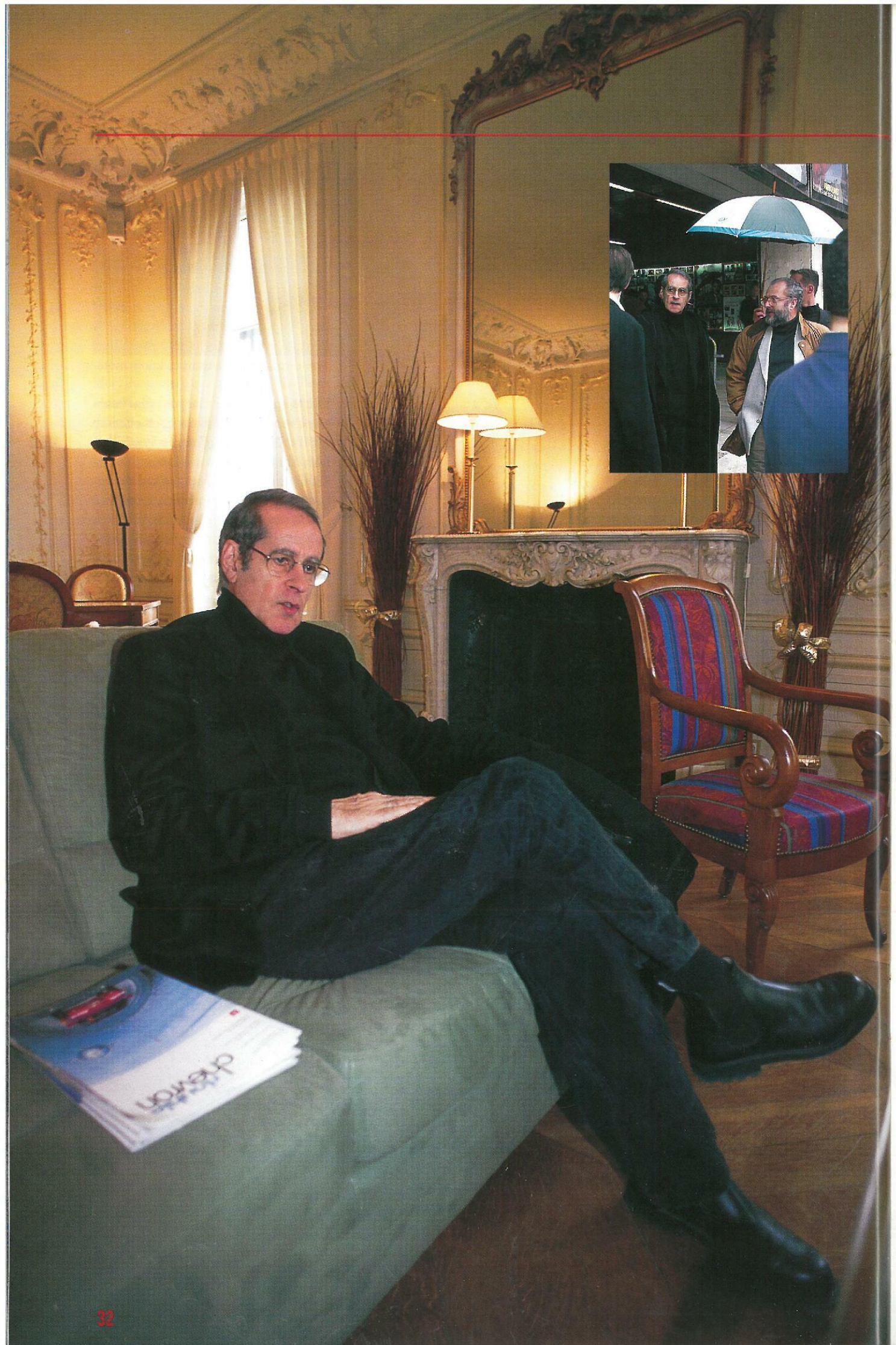
DC: Would you say that your film bears some resemblance to the Sacha Guitry 1950's film *Royal Affairs in Versailles*?

EM: Yes. My film is a tribute to Sacha Guitry in a way. Like him, I asked a number of major stars to play cameos. And the action frequently takes place in Versailles since Beaumarchais was a sort of undercover Minister of Foreign Affairs for both Louis XV and Louis XVI. I tried to work like Sacha Guitry, at least from a literary standpoint. But my film-making technique was totally different, since the cinema has advanced in leaps and bounds since Sacha Guitry's day!

DC: When you were shooting, did your film *Mon Oncle Benjamin* come to mind?

EM: Yes it did. The mood





of the film is exactly the same. Both films are set in the liberated and libertine spirit of the 18th century, the age of enlightenment. Benjamin Ratry, alias Jacques Brel, behaved in exactly the same way as Fabrice Luchini in *Beaumarchais*, in terms of behaviour and ideas. If I'd made *Beaumarchais* at the beginning of the 1970s, Jacques Brel would have played the role.

DC: Talking of roles, why did you choose Fabrice Luchini?

EM: He was an obvious choice. I love the theatre and of all the actors in his generation, Fabrice is the most gifted in his use of the spoken word, in the way he shapes each statement. And while he is skilled in the art of verbal jousting, he has a very modern technique that gives a contemporary air to the film.

DC: Why did you become a film director?

EM: It's something I've always done. It's what you'd call a vocation. I began making films at the age of 15. I used to write film scripts on an amateur basis during the school holidays. I directed films all the time, starring friends recruited from my school. Then I made shorts for about ten years before making my first full-length film in 1957. Really, I never considered doing anything else.

DC: Are there any directors you are particularly attached to?

EM: Not really. There are people I admire, like Orson Welles and De Sica to mention two of the earliest. I often go to see new films. It's a way of continuing my studies.

DC: Is that why you agreed to chair the 7th Valenciennes Festival of Action and Adventure Films?

EM: Jean-Louis Borloo, the Mayor of Valenciennes, asked me to do it. The title of chairman is not important but I had two major reasons for wanting to come. First, Jean-Louis Borloo is a friend of mine and second, I was able to see three or four films every day. That gave me an opportunity to appreciate the work of young directors. The cinema has advanced in leaps and bounds technically so it's always interesting to see what people are doing.

DC: What is your opinion of French cinema today?

EM: I feel that French cinema has cut itself off from the public since the *nouvelle vague* movement. It has become too inward-looking. We've had some great French films and there are directors who attract large audiences with films of superlative quality, people like Claude Sautet or Jean-Paul Rappeneau. But they're in a minority. People are now beginning to understand that films targeting a broad audience do not necessarily have to be devoid of culture. You could say that *Beaumarchais* is a modest attempt to recapture the quality of the French cinema of yesteryear. Perhaps that's why people say I'm an academic film maker.

DC: Out of all the films you have directed, which is your favourite?

EM: Well, I had to choose four or five of my own films - out of a total 33 - for the retrospective organized as part of the Festival. I picked out the ones that do not evoke painful memories: *The Passion of Slow Fire*, *Mon Oncle Benjamin*, *La Mandarine*, *L'Ironie du Sort*, *A Pain in the A...* and *Man in a Hurry*. Those are the films in which I feel I remained true to myself.

DC: Do you have any plans?

EM: Yes, I intend to return to my first love - detective films. They're always fun. I saw the film *Seven* recently and I was really impressed. I don't like the morality of the story or the content but I love the technique.

DC: Have you made many films for television?

EM: I've made as many for television as I have for the cinema. I've used television to make films that were more personal, adapting the work of my favourite authors, such as Balzac, Henry James and Colette. I've always alternated cinema with television.

DC: A fleet of Citroën Evasions is at your disposal while the Festival is in progress. Are you interested in cars?

EM: I'm a real fan of Formula 1 Grand Prix but I have no desire to drive a racing car. I love cars for their futile, poetic side, for the balance between human effort and modern technology. I'm less interested in everyday cars. I owned sporty cars in my youth, but now I'm lazy. Provided the car has good brakes, an airbag and an automatic clutch - it's fine by me!

DC: What does the name Citroën mean for you?

EM: The *Croisière Jaune* and the way I met my first wife. I was a kid when the *Croisière Jaune* took place and I saw it as a real adventure. I remember seeing it on news reels. To me, it was like somebody landing on the moon. The *Traction Avant* was a legend in its own time. And I met my first wife through Citroën. Back in 1956, I was making my first short film and I needed a Citroën 15 CV. I asked my assistant - Jean-Paul Rappeneau - to find one. He came back with a large grey car - and its driver. I used the car for the film and married the driver! That's my closest personal link with Citroën.



The Antony dealership

Continuity in cu

THE YEAR IS 1926. CITROËN LAUNCHES THE B14. ROBERT ARGONGUE, CHAUFFEUR TO FÉLIX SCHWAB AND ANDRÉ CITROËN, OPENS A DEALERSHIP WITH HIS WIFE GERMAINE. THE BUSINESS IS STILL GOING STRONG. THIS SPRING THE DEALERSHIP CELEBRATED ITS 70TH BIRTHDAY AND PAID GERMAINE ARGONGUE A WELL-DESERVED TRIBUTE. DOUBLE CHEVRON STROLLED DOWN MEMORY LANE WITH THE FAMILY.

Scene: the Citroën dealership on the Avenue Aristide Briand in Antony, a town in the south-eastern suburbs of Paris. Germaine Argongue has lived on the first floor above the garage since 1926. On 21 March, she celebrated a double anniversary: 70 years in the life of the business she set up with her husband and her own 95th birthday. The celebration was organized by her daughter, Janine Barreault, who manages the dealership

today. To mark the occasion, a Citroën B2 landaulet was given pride of place in the showroom between a Xantia and a Saxo, the marque's latest model. "Look at all those cars, particularly the B2 and the Xantia. They sum up my life with Citroën. When you look at them, you say, look at how far we've come. I'm glad that I was there to see all this progress. And the dealership has stayed in the family: my daughter manages it and my grandson

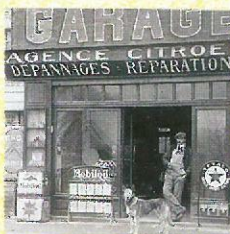


Customer service

helps her!" stresses Germaine Argongue. Although she retired some years ago, Mrs Argongue often leaves her stylish flat to come down and stroll round the showroom.

Extraordinary people

The Argongue family began its adventure with Citroën in 1925 when a young mechanic was hired by Félix Schwab,



Export Manager at the Citroën limited company. One of André Citroën's most faithful assistants, Félix Schwab set up the marque's network of subsidiaries and dealerships in Europe. He was also behind the opening of the British body-assembly plant in Slough in 1926.

Considered as one of the most modern plants in Europe in its time, the Slough facility turned out more than 28,000 vehicles, including the famous 5 CV Trèfle (see box) and the Traction Avant. The plant was closed in 1966. Over a period of six months, Robert Argongue enjoyed the exciting job of official driver to Félix Schwab and André Citroën. "My husband drove Félix Schwab to all his professional engagements and he sometimes replaced André Citroën's driver," remembers Germaine Argongue. "On more than one occasion, he drove André Citroën and his family to Deauville. He stayed there for a week once because Mr Citroën was presenting a new car and had organized a special competition. He gave a new car to the winner every night!"

André Citroën and Félix Schwab, two extraordinary people who made a strong

impression on their ambitious young driver. As a front-line spectator, as it were, Robert Argongue soon became friendly with the Schwab family. "For our wedding, Mrs Schwab hired a chauffeur-driven car so that I could enjoy a few days' rest in the Megève. What a wonderful memory. About ten years ago, we had the pleasure of meeting up with one of Mr Schwab's sons again and we had a great time swapping stories." With a certain

pride, Mrs Argongue tells us that her best man was René Rabaud, one of the mechanics who took part in the Croisière Noire on board the Pégase, a half-track. Between October 1924 and July 1925, the 16 men involved in the expedition drove eight half-track models 20,000 km from Colomb Bechar to Tananarive for the cause of science. "They brought a small monkey back with them. I got to know it really well because my parents looked after it for a while."

A Citroën devotee to the core

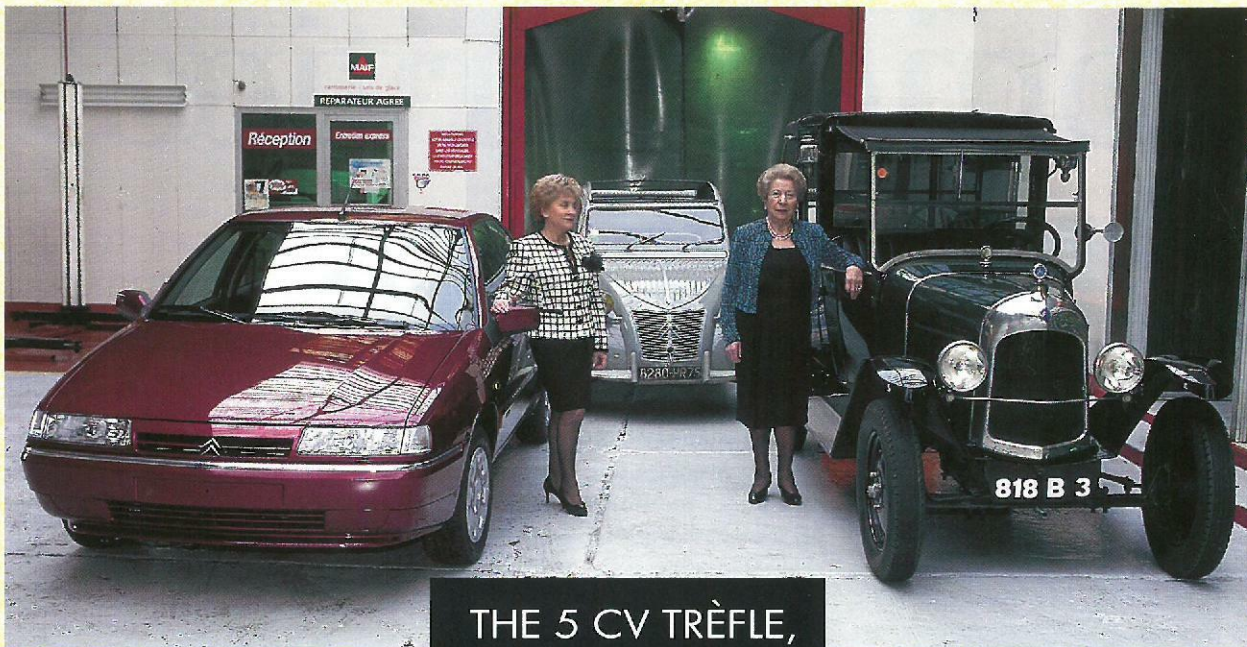
After his wedding, Robert Argongue gave serious thought to the idea of playing a greater role in the Citroën adventure. How? A Citroën devotee to the core, he decided to open a sales outlet with the marque's name. "He was a mechanic, I was a trained shorthand typist and accountant. He'd often say that together we could manage a sales outlet." And so it was that in 1925, Robert and Germaine Argongue left Félix Schwab to manage one of the 5,000 Citroën dealerships already open in France. The Argongues set up their

business on the Place de la Croix de Berny in Antony. "Besides representing Citroën, we also repaired cycles and motorbikes. There were just the two of us to start off with, but the business soon became really busy and we took on a pump attendant and two mechanics." It was not long before they needed larger premises. They set their sights on an old coaching inn and farm a few hundred metres away. "It was ideal. So we bided our time and then in 1926

we bought our first plot of land, then our second a little later and we gradually extended the business." And so the Argongue company - direct Citroën representatives - acquired premises of 430 m² split into a sales area and an after-sales area. Business boomed. "My husband was very well known and we used to work all week round. Sometimes people even woke us up in the middle of the night! Mind you, we were easy to reach because we'd converted the first floor of the garage into a flat." Like other Citroën representatives, the Argongues used to keep special order books in which Germaine Argongue would note the order number of the car the customer wanted. "Delivery times were quite long. We used to get one car a month on average." And when a car was a major hit with the public, the occasional riot used to break out when people got tired of waiting!

The mark of André Citroën

Robert Argongue sold all the passenger cars and utility vehicles made by the marque: the B2, the B2 Caddy, the B12,



THE 5 CV TRÈFLE, A LADY'S CAR

the B14, the C6.1, the C4, the C6, the 5 CV Trèfle, the Rosalie, the Traction Avant...

If you ask Germaine Argongue which models she preferred, she answers without hesitation - the 5 CV Trèfle and the Cabriolet Traction. "The Trèfle for its robust and attractive appearance and the Cabriolet Traction for its superb lines and red leather interior. My husband loved the DS." The spirit of André Citroën lives on in Mrs. Argongue's mind. "My husband greatly admired André Citroën. He was an extraordinary man. He was the one who invented and developed everything, from sales methods to human relations. I had the opportunity to meet him when I went to pick cars up from the Quai de Javel. André Citroën had an office on the first floor. He always used to say good morning." Germaine Argongue's voice trembles slightly when she describes how her husband used to come back from Citroën banquets brimming with enthusiasm. "I remember," she says, "one of the speeches André Citroën

The 5 CV Trèfle was unveiled at the 1921 Motor Show. During the course of its career, between 1922 and 1926, a total 80,759 units were produced. A small car (55 x 90,856 cm³ and 11 bhp at 2,100 rpm), the 5 CV was originally launched as a two seater. Frequently painted yellow, it was soon nicknamed *Petite Citron* (little lemon). It became the C2 when its frame was reinforced and it gained a chassis with a wheelbase of 2.25m and a track of 1.18 m. When the wheelbase was lengthened to 2.35 m, it became the C3. The 5 CV, known as the Trèfle or clover leaf, was the most popular model at that time. It gained its name from the layout of the three seats: two in front and one behind. Reaching an average speed of 60 km/h, the 5 CV was extremely popular for its robustness and its elegance. Designed for female customers, the Trèfle tourer heralded the popular car that would hit the market a few decades later - the 2 CV.

made at a banquet that I was invited to with my husband. He had the most incredible charisma. He was always one step ahead of everybody else. Even in 1926, the sales outlets were all organized in the same way: sales, after-sales, spare parts and second-hand cars. In short, the four sections that you'd find in any modern garage. And of course customer satisfaction was another fundamental." During the second world war, Germaine Argongue ran the garage when her husband was called up. "At the start, I still had two or three people helping me. But by 1939-1940, there was just one mechanic left. I did absolutely everything. We never closed." After the war, the car market entered a boom period and Janine Barreault joined her father at the garage as soon as she passed her baccalauréat. "That was the era of the 2 CV. Customers used to come in and put their names down on the waiting list. People went crazy for the 2 CV. The same thing happened for the DS."

When Robert Argongue retired in 1975 at the age of 77, Janine Barreault took over the family business. "We became a dealership and I had to bring in new people who were familiar with the new selling methods. We gave the premises a complete overhaul, putting in a real showroom, and extending the after-sales, spare parts and second-hand vehicles sections." The Citroën dealership in Antony now covers 4,600 m² and employs 50 people.

Citroën Vigo

A leader in industrial progress

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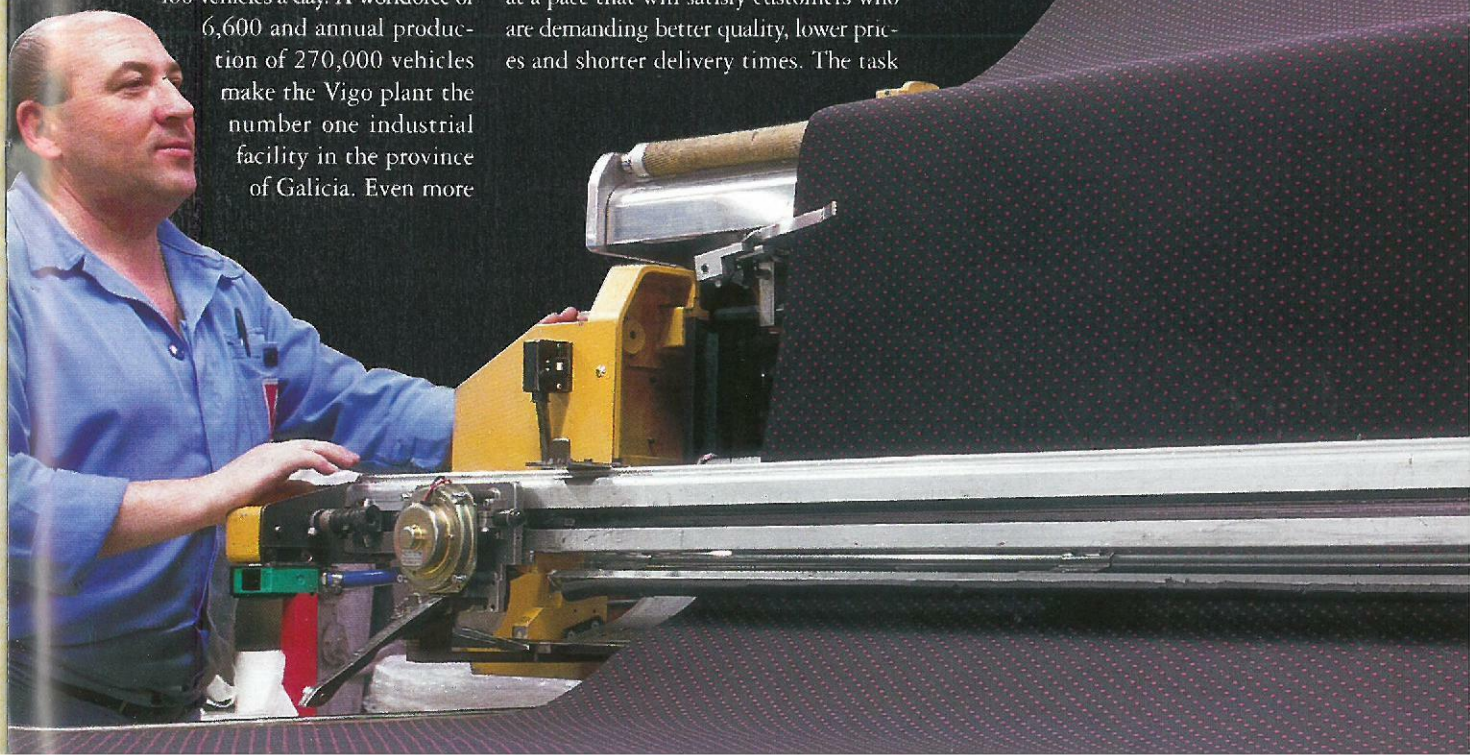
CAR BUYERS ARE BECOMING MORE AND MORE DEMANDING WHEN IT COMES TO QUALITY, COST AND DELIVERY TIMES. TO SATISFY THEIR REQUIREMENTS, THE VIGO PLANT IN SPAIN USES SOME OF THE MOST ADVANCED PRODUCTION METHODS AND TECHNOLOGY IN EUROPE. DOUBLE CHEVRON TAKES YOU ON A GUIDED TOUR OF CITROËN HISPANIA'S FINAL ASSEMBLY PLANT, AN ORGANIZATION THAT PLAYS A MAJOR ROLE IN THE LOCAL ECONOMY.

In the late 1950s, Citroën Hispania began manufacturing its first Citroën vehicles in an old workshop located in the port of Vigo. Nearly 40 years have passed since then, and big changes have taken place at that small factory, where 140 workers originally turned out 400 vehicles a day. A workforce of 6,600 and annual production of 270,000 vehicles make the Vigo plant the number one industrial facility in the province of Galicia. Even more

impressive, its constantly improved production methods and high-tech systems place it among the most modern vehicle assembly plants in Europe.

To maintain this level of excellence, the Vigo plant must meet a daily challenge: to produce hundreds of customized vehicles at a pace that will satisfy customers who are demanding better quality, lower prices and shorter delivery times. The task

calls for an all-out effort from every member of staff at every stage of production, from



AN ECONOMIC POWERHOUSE IN GALICIA

By setting up one of its main final assembly plants in Vigo, Citroën has made a significant contribution to the economic development of the Autonomous Region of Galicia. The Citroën Hispania subsidiary has provided a major industrial boost for this region, wedged between the Atlantic Ocean and Portugal, in the north-west corner of the Iberian peninsula. First, it has created more than 7,000 direct jobs, making it the largest employer in the region. Just as important, however, is the impetus it has given to the development of many companies specialized in automotive components, related products or services and who work with Citroën on a more or less direct basis. About 1,400 jobs are linked to the Vigo assembly plant, out of a total 2,000 in local industry. And all these activities naturally generate freight traffic for Vigo's port as well as trade for local businesses where employees shop.



the stamping, assembly and painting of the bodywork to the installation of the mechanical components and other parts on the car bodies and the testing and delivery of new vehicles. With its flexible, multipurpose facilities, the Vigo plant is able to produce four different Citroën models - the AX, the ZX, the C15 and the Berlingo, the marque's new utility vehicle - at the same time and with a full range of features and equipment. The daily output is 1,300 units. Substantial investments were made for the marque's latest utility model.

State-of-the-art stamping

The stamping shop marks the start of the production flow for the AX, the ZX, the C15 and the Berlingo, code-named the M49, and due to be launched this summer. The 250 people who work in this 21,000 m² shop make the wings, bonnets, doors, floors, wheel arches and roofs for the various models as well as the complementary structural elements and reinforcements for the car body. The stamping unit comprises two lines for cutting the sheet metal delivered to the plant in coils, and seven press lines for shaping the metal in a series of operations. Production is organized on a pulled-flow basis to meet the needs of the body assembly shop downstream. The impressive performance of the stamping shop reflects the many automated systems and advanced technolo-

gies in use there. The seven stamping lines are equipped with no fewer than 50 presses and 37 interpress robots to transfer parts from one press to the next. With this high-tech equipment, the shop consumes about 300 coils of sheet metal every day to produce an average of 3,200 parts an hour. Depending on the line, between three and six operations are required to give each part its final shape. The first press clamps the



sheet metal and produces the general shape and contour of the part in a single stroke. The other presses on the line perform the folding, trimming and punching operations. This battery of robots works at an extremely fast pace, turning out a finished part in just a few seconds.

However, humans also have an essential role to play in the stamping process. The skills of the installation supervisor, the end-of-line operator, the automation technician and the mechanic are indispensable at every step, since the machines must be programmed, monitored, and maintained. Some jobs

in the workshop cannot be turned over to machines. These include the development and maintenance of the tools that shape each sheet of metal. The parts, each one weighing several tonnes, are machined using numerically controlled equipment but they are then finished by hand like fine pieces of jewellery. Likewise, visual and touch inspections are systematically performed on all external parts. This is the only way to make sure that the finish is not marred by slight irregularities or roughness. However, a computer-assisted 3D measuring device operating on a sampling basis, is also used to make a general geometrical check of part dimensions.

Body-in-white: ergonomics and multipurpose systems

The quality of a car body in terms of assembly, welding and finish determines to a great extent the overall quality of the entire vehicle. Producing geometrically precise parts in the stamping shop is the first step toward achieving a high level of quality. The process is completed with the welding or crimping operations performed in the body (or body-in-white) assembly shop. A total 940 people work in the shop, which has a surface area of 65,000 m² and is divided into four units, three of which implement the multipurpose workshop concept developed by the PSA Peugeot Citroën Group. These three state-of-the-art workshops fragment the production process: sub-assemblies are put together on preparation lines and then transferred to flexible, multipurpose production lines where they are assembled with the other parts. This herringbone system keeps the main production flow fluid while optimizing the organization and the ergonomics of workstations. As a result, quality is improved, costs are lowered and lead-times shortened. The lines on which car-body parts are assembled and welded together are typical examples of these multipurpose installations. The subframe, side panels, roof and other main sub-assemblies - all of which were themselves produced by welding together pre-assembled sub-

ADVANCED INFORMATION SYSTEMS FOR PRODUCTION MANAGEMENT

To optimize plant performance at Vigo, men and machines are assisted by powerful, reliable and flexible information systems. The numerically controlled workstations, the robots programmed off-line and synchronized by PLCs, the local area networks with their extensive communication capacities, the measurement and quality control devices, and the software for trouble-shooting, preventive maintenance and part traceability are all key components in the production unit's central nervous system. Information technology also makes it possible to handle the considerable variety of features - colours, engines and options - offered by the vehicle range. The Argos production control system centralizes monitoring and management of all the production lines in the Vigo plant and organizes the daily scheduling (classified by series) of the manufacturing orders corresponding to the wide diversity of customer requirements. Just-in-time delivery of all parts to the assembly units is also coordinated by computer, in close relation with the logistics and procurement departments.





CITROËN HISPANIA: A FULL SERVICE AND A COMPLETE NETWORK

Several units work alongside Vigo, forming a strong logistics and sales network for Citroën's activities in Spain. One such unit is the Advanced Logistics Service Centre in Pinto, near Madrid. With a surface area of more than 35,000 m², this ultramodern facility houses the national spare parts distribution centre, a paint and body repair shop, a new-vehicle shipping centre and a used-vehicle storage area. The Citroën Hispania sales network has about 200 dealers and branches and 1,100 representatives.



modules (seat runners and braces mounted on a door panel, for example) - are brought together here. On these final assembly lines, which give the car its final shape, the welding robots work in tandem with measuring robots. The measuring robots are fitted with complex and precise automation systems to position all the parts within strict tolerances. Accuracy is immediately checked by a laser vision device.

The body assembly shop has 218 robots in all, 71 of which are dedicated to the production of the Berlingo. They are stationed along four kilometres of production lines and fed by 350 conveyor belts. As in the stamping workshop, automated systems play an important role. They improve welding quality while relieving workers of the most tedious tasks. At the same time, workstations have been upgraded to enrich the jobs of the operators. Under the terms of the self-inspection system, operators are responsible for their own work. This ensures a finish of the highest quality. Another factor ensuring a top-quality finish is that the robots are equipped with an automatic transfer system for the electrode clamps while the transformers transferring the electric energy required for welding are controlled by smart systems. These microprocessors

automatically correct the welding parameters according to the wear of the electrodes, secondary cables, and so on.

Painting: protection and appearance

The mounting of the opening panels, the final trim and any minor touch-ups that may be required complete the body assembly process. The bodies are then sent to the paint shop, where they undergo several successive treatments in dust-free rooms. A 500-strong work-



force conducts many different types of operation in this multipurpose workshop, which has a surface area of 58,000 m². Each process and each coating makes a specific contribution to the physical and chemical (corrosion) resistance of the body as well as to a flawless finish. The cars are put through a shower before being plunged into a phosphating-bond-

erization bath and then into a cathoresis baths in order to obtain a primary level of protection. The three-cation (zinc, nickel and manganese) phosphating technology produces an extremely compact and highly resistant microcrystalline layer on the surface of the steel, in which the crystals measure less than five microns. The bodies are then given a coat of primer between 35 and 40 microns thick, followed by several successive coats of enamel paint and varnish. Robots perform all of these operations, including the application of sealing mastics and special paints to protect the underside of the vehicles. But here, too, the skills of the human workers are just as important as the latest technologies in maintaining high-quality protective treatment and painting operations. To obtain a perfect finish, for example, the bodies are polished by hand. Workers are constantly on the alert to ensure that the workshop is not contaminated by particles from clothing, equipment, sanding or other sources. Staff wear special white uniforms and respect strict procedures. They dress in a sealed chamber, use ionized air for sanding/blowing and wipe vehicle bodies by hand after each operation.



An integrated upholstery workshop

The Vigo plant has its own upholstery workshop, covering 16,000 m² and employing 380 workers. The seats, door panels, and some of the trim parts for the models manufactured at the plant are produced in an adjacent building. The door panels are cut on a press, soaked with glue, covered with fabric and PVC and joined by high-frequency welding. Other operations, such as the addition of cubbies and hub caps, complete the assembly process. To prepare the seats, the pieces of fabric and PVC are cut on automated lines. Their borders are stitched or joined by high-frequency welding, and they are assembled to make the seat covers. The foam rubber and seat covers are then transferred to special assembly lines to be mounted on the metal frames. The fin-

A CORPORATE MISSION TO PREPARE FOR THE FUTURE

The advent of the European single market, the arrival of Japanese manufacturing plants in Europe and the commercial offensive mounted by American and South Korean carmakers are generating fierce competition. So Citroën has no alternative but to rank among the leaders. For this reason, Citroën Hispania has decided to achieve a high level of competitiveness not only in Europe, but throughout the world. To get to this level within five years - and stay there - Citroën Hispania has launched "Corporate Mission 2000". This wide-ranging plan of action is backed by a major investment and training programme. Its aim is to satisfy the requirements of increasingly demanding customers and to rank among the world's best vehicle assembly plants in terms of quality, costs, and delivery times. This is a major undertaking in which a strict, methodical approach, the systematic evaluation of results and the skills and commitment of the workforce pursuing a common goal count just as much as industrial innovation. "Corporate Mission 2000" is part of ongoing efforts to achieve continuous progress, based on the three main principles of Total Quality Management: satisfy the car buyer (of course), promote the long-term development of the company and satisfy personnel.



ished seats are delivered to the assembly workshop by overhead conveyor

Assembly: flexibility to enhance worker efficiency

The last operations in the production process are carried out in the two vast workshops of the final assembly unit. This unit, which can turn out about 1,300 vehicles a day when operating at full capacity, determines the pace of production for all the other workshops at Vigo. It occupies an area of 74,000 m² and employs nearly 2,400 people. Tasks include fixing body trim parts, performing mechanical assembly, testing the vehicles and sending them out to the sales network. Quality is a critical concern here because this is the last stage before the vehicle reaches the customer. The lines in the assembly shop must be extremely flexible in order to manage a wide range of colours, engines and options for the various models. This flexibility extends from the initial trim parts (carpets, wiring, etc.) to the coupling of mechanical assemblies (engine, gearbox, running gear, exhaust, etc.), the mounting of the car body on the mechanical parts above and the assembly of trim parts, seats and wheels.

To take full advantage of the preparation and multipurpose lines, final assembly uses fewer automated systems than body assembly. Here too, however, the assembly process is based on a system of parallel, autonomous lines synchronized with the main production flow lines, where as many operations as possible are performed. On both the parallel and main lines, efforts have been made to design ergonomic workstations. The aim is to simplify tasks and make it as easy as possible

for operators to check their work themselves, thus ensuring that all quality parameters have been satisfied. Most of the time, the vehicle body moves along at a constant speed on a runner whose height can be adjusted to give the operator easy access for manual assembly tasks. Robots take over, however, for operations requiring precise handling of heavy or cumbersome parts - installing the roof lining, gluing the windscreen in place, mounting the dashboard.

Once the vehicle has been fully assembled, it is set down on its wheels, and a series of stringent tests and adjustments are conducted. Sealing is tested by tropical showers, the door latches and smooth functioning of the doors are checked, the vehicle's mechanical systems are tested on roller type test benches, the wheels are aligned, the headlamps and pollution control devices are adjusted, and so on. A final inspection is carried out at the end of the line, before the vehicle is shipped. At the same time, serial numbers are engraved and the vehicle is given a special protective coating for the journey to the showroom.

Didier Counas

PROFILE OF THE VIGO PLANT

Established: 1958

Location: Vigo, in the region of Galicia at the north-western corner of Spain.

Surface area: 635,000 m², of which 400,000 m² are covered.

Main production areas: stamping, body assembly (body-in-white), painting, upholstery, final assembly, testing and central services (logistics planning, quality control, human resources, etc.). Engines and gear boxes are manufactured in France (Trémery et Douvrin, SMAE). Front suspension parts are manufactured at Vigo.

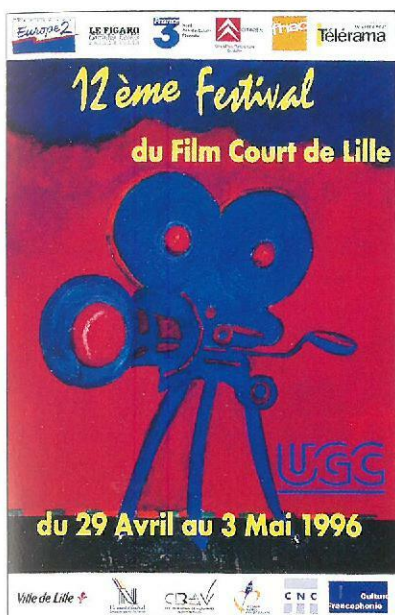
Daily production capacity: 1,300 vehicles (AX, ZX, C15 and the new utility vehicles, the Citroën Berlingo and the Peugeot Partner).

Output is exported to 51 countries, with the largest proportion going to other European countries.

Personnel: 6,600 people, including some 175 managers, 1,250 supervisors (ETAM: employees, technicians and supervisors) and 5,200 skilled or specialized workers.

Employee involvement: 200,000 hours of training, 280 quality circles, 14,000 suggestions submitted in 1995.





Citroën in shorts

Citroën Lille placed three Saxos at the disposal of the organizers of the Festival of the Short Film, organized in Lille between 29 April and 3 May. A special pass available from the marque's sales outlet in Tourcoing gave film buffs access to the "retrospective" sessions, which showed films made by Woody Allen, Louis Malle and Wim Wenders on the subject of the cinema. The Lille festival offered 35 film-makers a platform on which - for a short while - they could express themselves on subjects as varied as imagination, love, fantasy, violence - and reality.

Grouping skills in order to work together

To provide the best possible conditions for the design, development and production of components demanding expertise in hydraulics, a special centre was set up at the Citroën plant in Asnières on 1 May. The centre groups all the skills required to meet the needs of Citroën and the group in the area of hydraulics technologies. It has a number of delegated departments: Design and Testing, Process Engineering and Prototypes, Production, Logistics, Quality Management, Human Resources, Data Processing and Purchasing. All staff

members are attached to the director of the centre who comes from the marque's Manufacturing Division (DFA).

Framework agreement with the Ministry of Education

A framework agreement signed last November by Jacques Calvet, Chairman of Automobiles Citroën, and François Bayrou, Minister of Education and Research, will take effect next September. The agreement consolidates 25 years of good relations between the company and the education system and initiates nationwide annual discussions between top-ranking representatives from the Ministry of Education and Citroën.

Rallycross 1996: Jean-Luc Pailler opens the season

The first race of the French 1996 Rallycross Championship took place on 27 and 28 April. Jean-Luc Pailler and his 4-wheel drive Xantia Turbo won both qualification events on the Essay-Orne circuit, ahead of Michel Liger in a 4-wheel drive ZX Turbo and Jacques Fontbonne in an S2 Audi Coupé. Jean-Luc, a native of Brest in Brittany, takes first place at the head of the provisional championship rankings in the Maxi-



Tourism Division, which replaces Division 2.

Sylvain Poulard in his new ZX Kit Car from Citroën Ouest pulled off a masterly coup by winning the two qualification events. Caty Caly, defending her title as French champion, was also trying out her ZX Kit Car, decked in the livery of the Citroën network. Caty finished 4th in

the rankings of the Tourism Division, formerly known as Division 1.

Music, cinema and sport

This spring, Citroën decided to become involved in a host of artistic and sporting events, lending vehicles to the organizers on each occasion. The marque placed 14 vehicles at the disposal of the organizers of the Printemps de Bourges music festival while eight vehicles (XMs, Evasions and Saxos) were loaned for Film-Makers and Cinemas in France, a two-week event organized as part of the Cannes Film Festival between 9 and 21 May. A reception area was set up on the Citroën Terrace at the Noga Hilton for journalists and representatives of the films selected. Citroën also loaned 57 vehicles from the entire range to the organizers of the Midi Libre cycle race between 21 and 26 May.

Citroëns rally round

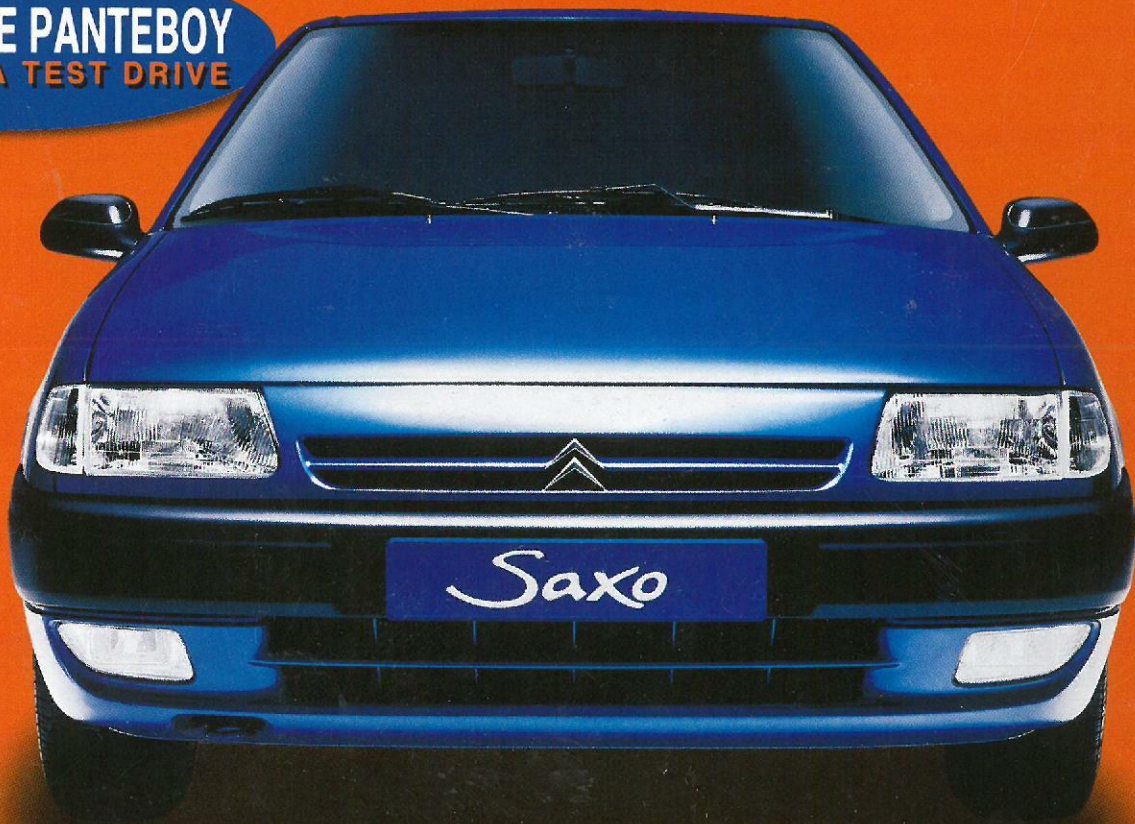
The marque's Dutch subsidiary organized an original operation on 18, 19 and 20 April. It invited all the owners of old Citroëns - models no longer in production - to take part in a classic car rally. Setting off from the Citroën dealership in Tilburg, southern Holland, the participants drove 1,500 km through Belgium and northern France, before returning to their original starting point.

Είμαι εδώ!

 **CITROËN**
Saxo

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