

DOUBLE CHEVRON

AUTOMOBILES CITROËN NEWS MAGAZINE

CITELA

TOMORROW'S TOWN CAR



JOB PROFILE: PROJECT DIRECTOR
A PASSION ON ICE

EYES ON THE ROAD

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A 100% electric-powered and recyclable vehicle, the Citela represents a new alternative to city life.



Teamwork. A concept made for Jean Heinrich, first project director.



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Of the five cars on the starting line, all five finished the event and garnered the record number of stage victories.



Driving on ice: where passion and professionalism come together.



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Automobiles Citroën is now firmly established as a manufacturer capable of rising to the challenges of the world automotive market. With its four families of models, the marque is present in over 80 countries. Citroën combines the latest working methods, effective innovation and total quality management techniques to regularly launch new products that anticipate motoring trends and drivers' needs. For more than 70 years, each new Citroën model has been a product of the enthusiasm of the men and women who have contributed to its design.

Published three times a year, *Double Chevron* presents our vision of the motoring world. Readers will meet the people who embody the company's ongoing quest for superior quality and improved safety. We shall also take an insider's look at the fuel-efficient vehicles — soon to be completely recyclable — that prove Citroën's long-standing commitment to improving the quality of everyday life.

Double Chevron is also a window on the outside world. Our aim is to keep readers informed of landmark events and Citroën activities all over the globe and to take an inquiring look at our environ-



ment. Our regular "Eyes on the Road" section (Pleins Phares) will focus on research, the economy, the professions within the motor industry, sport, "motor mania" and new products.

This first issue includes articles on the Citroën ZX Automatic, a new version of the model that has won prizes throughout Europe; and the Citela, an electric car designed to improve the quality of city life.

For those who may be a little nostalgic for Citroën's past, *Double Chevron* will present glimpses of company history in a series of retrospective articles. And since motoring and travel go hand in hand, each issue will help you discover a region of France or explore a special tourist destination. And we have much more in store...

Issue No. 1 takes us along on the Total-Paris-Sirte-Cape Town rally, with a special feature on the Keetmanshop to Cape Town leg.

With summer in the air, we set off to explore the Calvados region of Normandy in northern France.

Finally we take you on a guided tour of the Toulouse-Lautrec exhibition in Paris and the Universal Exposition in Seville.

Régis Ducorroy.
Director of Communication
and Public Relations.

CITELA

RECHERCHE

THE CAR FOR TOMORROW'S CITIES

Designed to help improve the quality of city life, Citela (Citroën Electric Automobile) delivers practical solutions to the pressing problems of tomorrow's urban environment.

AROUND THE TOWN IN EIGHTEEN MINUTES

Citela is practical for town driving. With a maximum cruising speed of 56 mph and top speed of 69 mph, it can accelerate from 0 to 30 mph in under 8 secs.

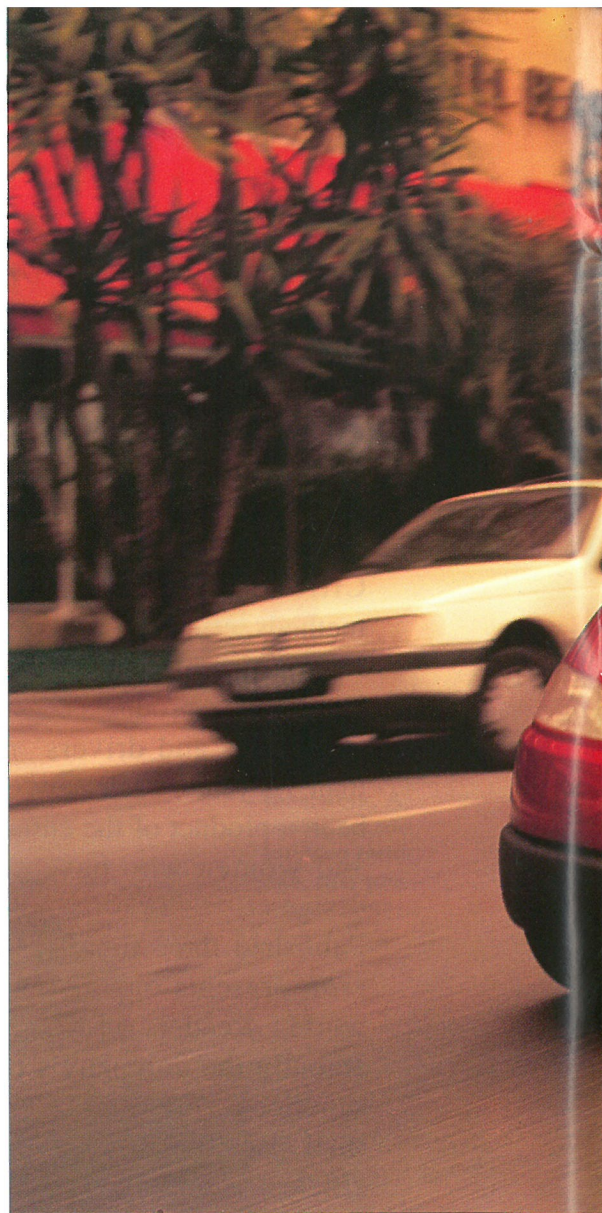
The platform to which the power unit is fixed has been designed to last. This is only natural, since the life expectancy of the power unit (625,000 miles) and the nickel-cadmium batteries (10 years) is exceptionally high. Citela has also been built for range. At a steady

25 mph, it can cover 130 miles and 69 miles for the urban cycle. And "filling the tank" could not be simpler. The rear number plate lifts up to reveal two recharge sockets.

One is a conventional 220 volt socket that recharges the battery in eight hours.

The other is much more rapid, giving 1.25 miles of range for each minute of recharge. In 18 minutes, the driver has enough power to drive around a city the size of Paris without a hitch.

Citela is the car you will drive tomorrow. When Citroën unveils its new all-electric town car at the Geneva Motor Show, the marque will be breaking new ground. With a range of nearly 70 miles in the urban cycle, Citela can cruise at a steady 56 mph and reach a top speed of 69 mph. Double Chevron looks at this major innovation.

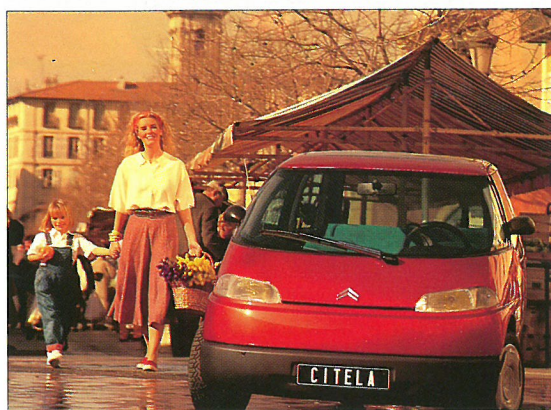


SILENT... AND RECYCLABLE

Citela is a clean, silent electric town car with all the ecological qualities needed for the harmonious cohabitation of driver and pedestrian. It glides through the city streets without noise or pollution. Citela is environment-friendly throughout its serviceable life. And beyond. Easy to disassemble, the car is built of clearly marked plastic parts that are interchangeable and recyclable. And Citela is also reliable. The shell made out of synthetic materials and the over-



Compact, silent and recyclable, Citela is a highly advanced electric vehicle. Practical about town, it is fully adaptable to user needs.



hanging protective skirt offer excellent resistance to knocks.

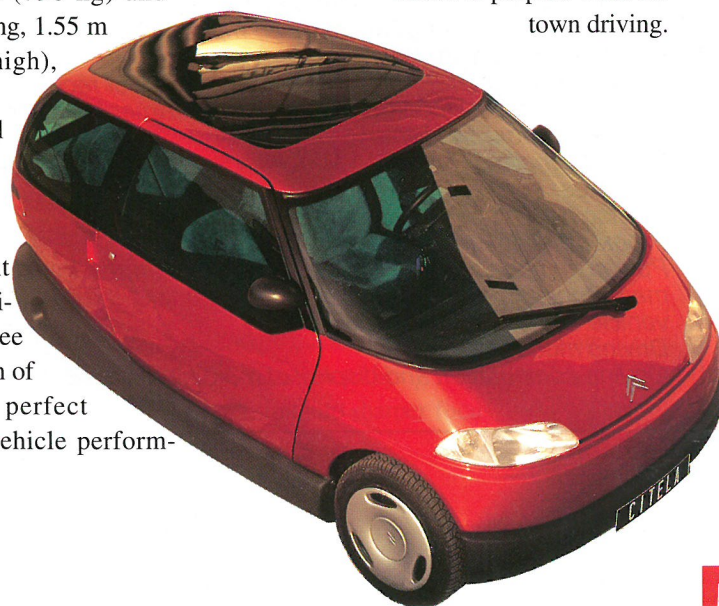
MICROPROCESSOR CONTROL

The driver's first impression is of a car that is easy to manoeuvre and simple to park. Lightweight (790 kg) and compact (2.96 m long, 1.55 m wide and 1.44 m high), Citela is fully automatic — the ideal town car. It is also economical.

A programmable power management system gives the driver a choice of three running modes, each of which provides a perfect balance between vehicle perform-

ance and the length of the trip. An on-line display system constantly shows the remaining range and suggests the optimum driving conditions. Fully automatic, the car is simply controlled by brake and accelerator. The gearbox has been replaced by an array of buttons.

Citela is purpose-built for town driving.



CITELA THE CHAMELEON CAR

Citela can swap roles at the drop of a hat. In under five minutes, it changes from an urban runabout to a hard-working goods vehicle.

Thanks to its highly original design — a detachable passenger cell fixed to a

platform — the car can quickly adapt to its owner's wishes. It can be a nifty roadster one minute and a sedate car for taking the children to school the next.

But whatever Citela is used for, Citroën has paid particular attention to comfort, space and light.

Thanks to a wrap-around windscreen and a transparent roof, passengers and drivers get to see the city from a different angle as they weave in and out of traffic jams. The comfortable, roomy interior can easily accommodate three adults and a child.

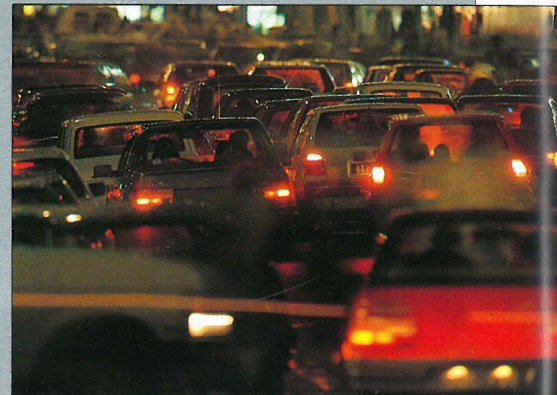
In 1993, PSA Peugeot Citroën will run a pilot scheme in association with the French electricity board (EDF) in the port of La Rochelle*. The city will be the first in the world to be equipped with recharging terminals that will allow electric town cars to be used on a daily basis by the general public.

** A number of electric C15 and C25 vans have been in service in La Rochelle since 1987.*

Irespective of its numerous drawbacks, the motor car continues to elicit passionate reactions. This was the finding of a recent poll of the inhabitants of the Paris region.

Cities are like magnets, attracting people in even greater numbers and mushrooming in our modern-day society. More than 80% of Europeans are city dwellers. In France, one person in five lives in Paris and its suburbs. This predilection for cities has led to a substantial increase in the use of the motor car. Car journeys increased by 40% in the Paris region between 1969 and 1990 and are likely to rise by a further 30% by 2015. The results are there for all to see. Pollution, noise, traffic jams and frayed tempers are the daily lot of the city driver.

But despite these constraints, the car



remains a symbol of personal freedom. According to a recent opinion poll*, 67% of the inhabitants of the greater Paris region believe that the motor car is indispensable or highly useful around town. The respondents were hostile to any measures to ban traffic from city centres. To respond to these difficulties, which can only increase in the future, car-makers such as PSA Peugeot Citroën are coming up with new solutions: improved public transport, more car parks, interactive traffic management systems and cars specially designed for city driving. Cars like Citela.

** Sofres poll on transport in urban areas carried out between 9 and 14 September 1991 among 600 inhabitants of the greater Paris region aged 18 and over.*

TECHNICAL SPECIFICATIONS

- Length:** 2.96 m.
- Width:** 1.55 m.
- Height:** 1.44 m.
- Turning radius:** 4.30 m.
- Wheelbase:** 2.10 m.
- Weight:** 790 kg.
- Maximum cruising speed:** 56.25 mph.
- Maximum speed:** 68.75 mph.
- Acceleration:** 0 to 30 in under 8 secs.
- Range:** 131.25 miles at a steady 25 mph; 68.75 miles urban cycle.
- Power unit:** 72 V/20 kW.
- Rapid recharge:** 1.25 miles' range per minute of recharge.
- Batteries:** NiCd; located in front compartment and central tunnel.
- Power:** approx. 14 kW/h.
- Tires:** Michelin 155-65 R14 MXL with low tractive resistance.
- Features:**
 - Electric heating generator and heated windscreen.
 - Programmable preheating system.
 - Power management and driver support systems: three pre-programmed running modes make it possible to adjust the performance of the vehicle to the length of the trip.
 - Driving mode read-out.
 - On-line computation and display of remaining range.

NEW CAR FOR CHILE AND MALAYSIA

ECONOMIE

The market débuts of the Citroën ZX in Chile in December 1991 and Malaysia in February 1992 were marked by special advertising and promotional programmes in each of these countries, where Japanese carmakers have a particularly strong position.

JAPANESE DOMINATION

Honda, Mitsubishi, Nissan, Toyota and other Japanese marques have captured a very substantial share of the Chilean and Malaysian markets. In Chile's 53,000-strong private car market, for example, the Japanese have achieved phenomenal penetration rates and hold an impressive 50% share of the overall market — compared with 5.6% and 2.7% respectively for France's Renault and Peugeot. So the Citroën ZX is in an unequivocally competitive environment in Chile, where the AX and the BX are already on sale. With the ZX, Citroën hopes to corner 3% of the market, Citroën Chile's 1992 sales target being 1,600 units.

MALAYSIA'S NATIONAL CAR

One Malaysian carbuyer in every two chooses the Proton Saga. This copy of the Mitsubishi Lancer Fiore was developed in response to the Malaysian authorities' determination to promote a national car. The Saga is assembled locally by Proton — a parastatal company jointly owned by Mitsubishi and the Malaysian government — and is the most inexpensive model on the market thanks to tax exemptions. For 1990 the result is a stunning 60.8% of Malaysia's private vehicle market.

Already active in 85 countries with an international network of 11,300 sales and service centres, Citroën plans to make the ZX the flagship of its international expansion strategy.

After a successful market launch in France and the rest of Europe, the ZX collection is taking to the roads in Chile and Malaysia.

In Malaysia, where the Japanese have achieved sales of 100,000 private cars, Citroën's policy is to promote vehicles that correspond exactly to market requirements. The marque's import agent "Directional Malaysia SDN BHD" is part of the Master Carriage group and has been importing and assembling the BX GTI since 1989. The XM, which is imported fully assembled, has been available in Malaysia since 1990. Master Carriage is a major company that already handles full assembly and sales for Mitsubishi, Isuzu and other marques. Citroën is aiming at a penetration rate of more than 2% through the market launch of the Citroën ZX.

PROMOTIONAL PROGRAMME

To publicize its new product, Citroën's entire advertising and promotional package focused on the Citroën ZX Rallye Raid, which is the predecessor of the Citroën ZX series model. In addition to its advertising campaign and interviews in national economic and motoring publications, Citroën

organized meetings with dealers, journalists and local VIPs. As many as 150 Chilean luminaries attending these meetings witnessed lively exchanges

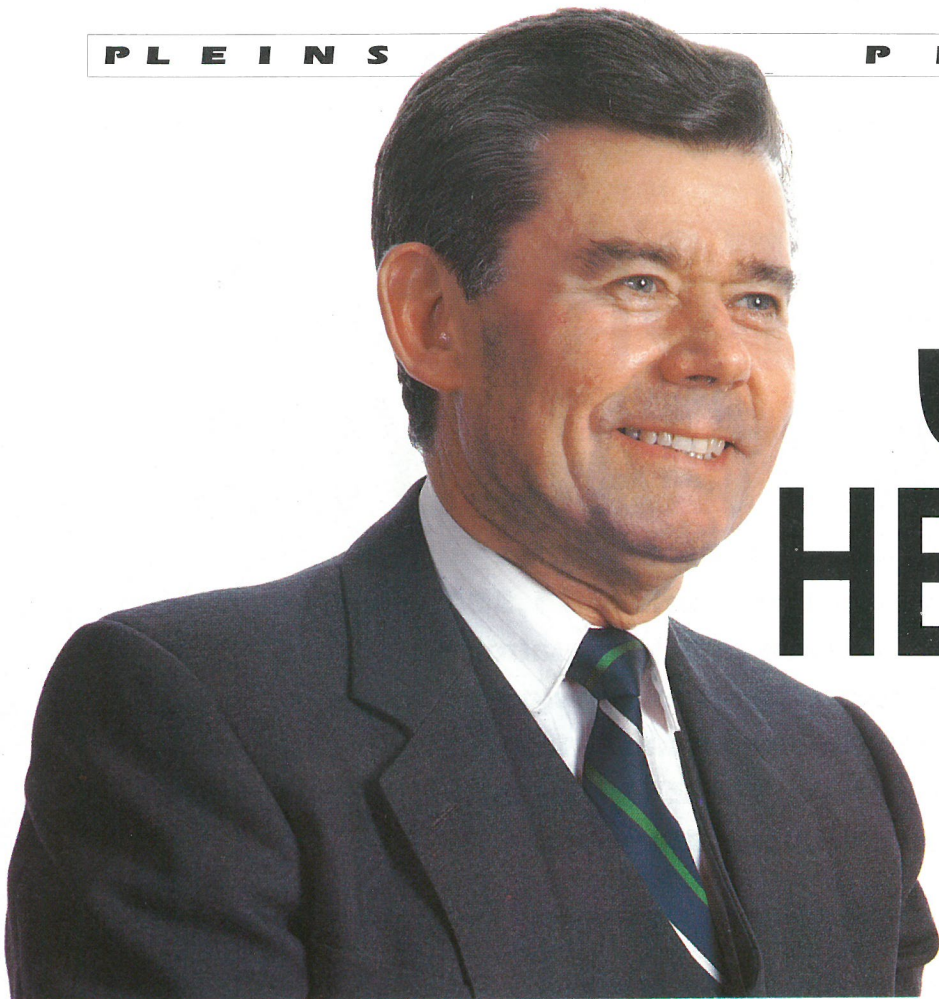
COUNTRIES OF THE FUTURE*

Malaysia
 Population: 17,300,000.
 Area: 329,749 km².
 Density: 51 inhabitants/km².
 Capital: Kuala Lumpur.
 Per capita GNP: US\$ 2,130.
 Sales of private cars: 100,000.
 Total private cars on the road: 1,504,200.
 Languages spoken: Malay, English, Chinese and Tamil.

Chile
 Population: 13,100,000.
 Area: 756,945 km².
 Density: 17 inhabitants/km².
 Capital: Santiago.
 Per capita GNP: US\$ 2,840.
 Sales of private cars: 53,000.
 Total private cars on the road: 660,000.
 Language spoken: Spanish.

*1991 figures.

between an organizer and... a Citroën ZX Volcane — a remote control system enabled the car to provide enthusiastic answers to all the interviewer's questions! These two launch programmes provided further evidence of Citroën's marketing verve and steadfast determination to bring its international dimension into sharper focus.



J ENTRETIEN JEAN HEINRICH, PROJECT DIRECTOR

Jean Heinrich headed one of the largest industrial facilities in France for more than 10 years before becoming Citroën's first Project Director. In an interview with Double Chevron, Jean Heinrich explains what this job entails.

Jean Heinrich (1), how did you arrive at your present job of project director?

Jean Heinrich. I have had an interesting career, as every job I have been given has been in a newly created post. I joined Citroën at the age of 24 in the engineering department, where I was project leader for the construction of the Metz-Borny plant. Then, in 1972, I took over at the head of the Comotor

factory in eastern France: Comotor is a joint subsidiary with AUDI/NSU, producing rotary engines. In 1975 I returned to head office to manage the Citroën international division's plan and programmes (2). Four years later I moved to Lorraine as head of the newly-formed Société Mécanique Automobile de l'Est (SMAE) (3). And since 1989, as you know, I have held the post of "new vehicle" project director.

Can you explain what a project director does?

Jean Heinrich. The primary objective of the project director is to ensure that a project is coherent from the outset and is then conducted in a coherent fashion. To achieve this objective, he needs to coordinate everything the different divisions do towards creating a new vehicle.

He checks that the project complies with General Management's brief and that each individual division reaches its targets: specifications, quality, reliability, schedule, price, margin, investments and profitability. One thing that can blow a project off course is deciding to change tack at the wrong time. Especially when these decisions have repercussions on other parts of the process. Untimely decisions are a source of non-quality, late completion and excess cost. To avoid them, we need to encourage teamwork and consultation from day one of the project.

How have you gone about achieving this objective?

Jean Heinrich. First we set up a project team that is responsible for conducting and monitoring the different stages in the pro-



«We need to favour from the offset the qualities of teamwork and support.»

«Everybody involved in the project at a given moment in time works together at the project team's central offices.»

ject. The team is made up of the project director, three project controllers to monitor quality, cost and schedule targets, five project managers for the different divisions — design, product, production engineering, manufacture and Sogedac (4) —, and, last but not least, the task officers.

Then we divided the global objective into sub-objectives and placed a task officer in charge of each sub-objective. Lastly, we centralized the project team geographically and involved the main suppliers as soon as the project was launched (5).

A total of some fifty people are involved in controlling design work, ensuring targets are met and forming the interface between the different divisions so the project remains coherent

throughout.

Can you give an example of what a task officer does?

Jean Heinrich. A task officer can be in charge of a specific set of tasks either connected with a design function (styling, bodywork, equipment, etc.), a production engineering function (stamping, body assembly, elastomer, etc.), or a manufacturing function.

Do you really involve the suppliers in your projects?

Jean Heinrich. Suppliers have always been consulted at some point during the design process. By considering suppliers as partners and incorporating them in the project team as far upstream as possible, we form a different kind of bond and can win their full support for our efforts to meet targets (see box).

(1) Born in Paris in 1936, Jean Heinrich's roots are in Alsace. He is married with three children.

(2) Created in 1975.

(3) Today, SMAE produces more than a million engines annually at Metz-Trémery and a million gearboxes at Metz-Borny with a work force of 5,700.

(4) Sogedac is the central buying unit for the entire PSA Peugeot Citroën Group.

(5) Two engineers from Usinor and Saint-Gobain are already working with the project team at La Garenne.

BACKGROUND TO THE PRODUCT DEVELOPMENT CHARTER

Carbuyers in Japan change their cars an average of every four years. To keep pace, Japanese carmakers had to devise new working methods that have now slashed the time needed to design a new model from five years to less than four. When the single European market becomes a reality on 1 January 1993, European carmakers will need to have reached the same kind of performance if their new models are to stay new for long enough to retain their market share.

To reach that objective, Citroën has introduced the Product Development Charter — a set of measures and methods aimed at streamlining the new product development process.

The Charter has three basic objectives:

- quality management,
- cost and investment management,
- reduced design time (from 5 years to 4 years by 1994 and to 3 years by 1999).

Part of the Charter is a new approach to project management whereby the project director has a global view of the project and can monitor developments at each stage and in each division at all times.

While working on a temporary assignment in 1990, Patrice Tavares discovered the world of robots, those super-efficient machines that make the 3,500 spot welds on each Citroën ZX at the Aulnay production plant (1). Patrice had no special training in robotics. In mid-1991, the company offered him a contract as part of a government sponsored youth training programme, and he accepted with alacrity.

"I felt that I needed to broaden my professional and technological skills," said Tavares. The title of "robot line supervisor" defines a precise function. *"I have to make sure that my 14 welding robots are perfectly synchronized and finish the side panels of the Citroën ZX properly."*

As part of a twelve-man team, Patrice is responsible for programming, maintaining and supervising the machines on a permanent basis. *"We can't afford to halt production for more than five or ten minutes. A ZX body must roll off the line every 48 seconds."*

Although Tavares has learned to perform a number of troubleshooting operations by himself, he can call on

the specialists from the maintenance department if the need arises.

The VDUs and the control panels provide a permanent stream of information about the operational status of the robots. Tavares is on the alert, his eyes and ears attentive to the slightest sign of an anomaly. These new-found skills were acquired rapidly.

Patrice also plays an active part in finding ways to improve the performance of his robots. *"A mate and I thought up a process whereby the work of a malfunctioning robot is automatically taken over by its neighbours. The other robots step in, and production continues without missing a beat."*



METIER

L LINE SUPERV

Now, if a robot breaks down, the line continues to operate uninterrupted.

TWO YEARS FOR 924 HOURS' TRAINING

Patrice Tavares was born in 1970. He obtained a diploma in electrical engineering from a technical high school just outside Paris, where he now lives. His initial training is reinforced by practice periods inside the company.

Depending on the complexity of the installation of which they are in charge, each qualified supervisor follows a programme of technological and professional training throughout his career in that post.

For the recently created job of robot



A full team member, Patrice Tavares programs, maintains and permanently monitors his robots.

Patrice Tavares, 21, is in charge of fourteen robots. Armed with a technical diploma, he joined Citroën in 1990. His career path could be that of hundreds of youngsters.



MECHANICAL AND ELECTRICAL ENGINEERING: TOMORROW'S WORLD

Sixty-eight per cent of the new technicians recruited by Citroën in 1991 and 1992 were trained in mechanical or electrical engineering during their secondary school careers. School leavers with two years in further education have the opportunity to join the workforce of a fast-developing carmaker. These newcomers have the choice of a broad selection of jobs, from design to production, that will allow them to become an integral part of the marque's specialist teams.

- automotive engineering: draughtsman, prototype technician, design and testing technician, laboratory technician;
- production engineering and equipment: automation design technician, production engineering technician;
- manufacturing: production technician, supervisor, production coordination technician, maintenance technician, quality control technician.

All these technologically-led specialisms have one thing in common: in each area, communication and teamwork are essential.

WISOR AT AULNAY

line supervisor, Citroën's Aulnay plant has put together a course lasting 924 hours spread over two years.

JOB PROFILE

Citroën no longer applies scientific management methods requiring large number of unskilled workers and a high degree of supervision. Instead, the marque relies on trained operatives who are capable of taking initiatives, acting independently and adapting to an organizational structure based on information sharing, communication and teamwork. Line or module supervisors are professional or technical operatives working in modern industrial plants specialized in steel casting, stamping, machining, coachwork and

vehicle assembly. Each supervisor is in charge of an automated production module and is responsible for the manufacture of his product. With the assistance of a team composed of a foreman, operators, assistants and technicians, he is responsible for controlling the quality as well as the quantity of the products in his charge. He is also responsible for retooling and setting the machines. Depending on his level of training, he corrects malfunctions and plays an active part in preventive and curative maintenance with the assistance of the specialists from the maintenance department.

(1) The Aulnay production plant manufactures 91,800 AXs and 113,550 ZXs per year with a staff of 5,790.

JOB DESCRIPTION

Job title: Robot line supervisor.

Location: Asnières, Aulnay, Caen, Charleville, Metz, Meudon, Rennes, St-Ouen, Trémery.

Qualifications: National diploma (secondary school or higher) in electrical or mechanical engineering.

Qualites: Good communication skills; ability to work in a team; individual initiative; analytical mind; well organized

Vocational training: Government youth-training programme; on-the-job training.

Working conditions: Shift work or standard.

Starting salary (at 1/1/92): Between FF79,300 and FF93,145 p.a. plus bonus depending on qualification.

Career path: Technician/supervisor in a variety of sectors of activity.





The first Total-Paris-Sirte-Cape Town route plunged into virgin territory this year. For the first time, competitors discovered the country of Namibia, which had been out-of-bounds to the rally before independence in 1990.



SPORT

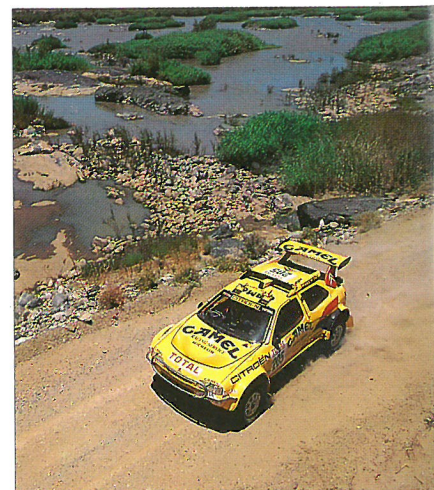
RALLYE RAIDS: PUSHING BACK THE FRONTIERS

Race organizer Gilbert Sabine rose admirably to the challenge: in 1992 the Paris-Dakar rally gave way to the Total-Paris-Sirte-Cape Town event. It now extends over 7,600 miles, with 3,200 miles of special events.

This fantastic event, leading competitors across the African

continent from north to south, now passes through ten countries, each with vastly differing terrain: Libya, Niger, Chad, Central African Republic, Cameroun, Gabon, Congo, Angola, Namibia and South Africa.

The real race takes place between Misratah in Libya and





Competitors in the Total-Paris-Sirte-Cape Town rally cross the whole of Africa from north to south. The muddy terrain of central Africa is a new addition to the desert sand, stones and fech-fech.



N'Guigmi in Niger — the first six days, over sand-dunes and rocks and through the lush countryside of the Ténéré region. And in Namibia, competitors have the chance to explore hitherto unknown territory. Although not ahead in the overall table, the Citroën ZX Rallye Raid have still collected a

record 9 out of 16 stage wins. Moreover, of the five cars that started the race, not one failed to finish, once more proving the reliability of the Citroën ZX Rallye Raid.

At over 10 hours by plane from our continent, Namibia is an unknown country for most Europeans. But now, with the exception of the forbidden diamond territories of the Atlantic coast, drivers have the chance of discovering this unspoilt, virgin racing terrain.

KOKERBOOM FOREST

The wide, open spaces, the wild and changing lands of Africa present a worthy challenge to the competitors.

In the north, the National Reserve of Etosha covers more than 12,500 square miles, and is home to giraffes, gnus, zebra,

elephants, springboks and lions. Columns of sand rise into the air above the flat and salty bush-land.

Kudus and oryx gambol through the red sands of the highest dunes in the world. Ochre tracks criss-cross chains of mountains eroded by the wind since the dawn of time. All around, the incredible feeling of freedom and tranquility. Further south is the fascinating forest of 300 kokerboom trees. Half oak, half cactus, these silver and gold porcupine-trees shimmering in the heat of the African sun are unique in the world. Hereros warriors used to smear the poisonous kokerboom sap on the deadly tips of their assegais.

Further south again, the 100 mile-long Fish River Canyon would not look out of place in

and verdant oasis in a land sun-baked from the first light of dawn to the orange and purple dusk. The savannah grasslands nudge the doorsteps of scattered farmsteads, and the local people go slowly about their work, mostly in the fields. All along the route, barefooted children walk, wide grins lighting up their innocent faces. Peasant carts seem to appear from nowhere, drawn along by horses and mules. Fennecs sit, undisturbed, in the overwhelming heat and silence that give Namibia its strange aura of infinity: nature pure and unspoilt.

BLINDING HEAT

The route through South Africa leads across an impressive landscape: vast plains and mountains heavy in the heat haze, red tracks shimmering in



Colorado. It cuts a 350 ft deep swathe through the desert plateau, where 60°C fluoride-rich springs bubble to the surface.

Cliffs 300 ft high tower above a shining strip of winding, green-speckled water, the sinuous snake-like vestiges of a 300-year old river.

The second-to-last stop on the rally route is the town of Keetmanshop, capital of the southern province of Namibia, a peaceful

the heat of the sun. It winds through lush valleys and vineyards irrigated by canals stretching for hundreds of miles. From desert to scrub, to verdant and luxuriously fertile lands, this is the Africa never before visited by rally competitors. Near the border between Namibia and South Africa runs the Orange River, which owes its name to the strange colour of the water. The last stop-over is



SOUTH AFRICA*

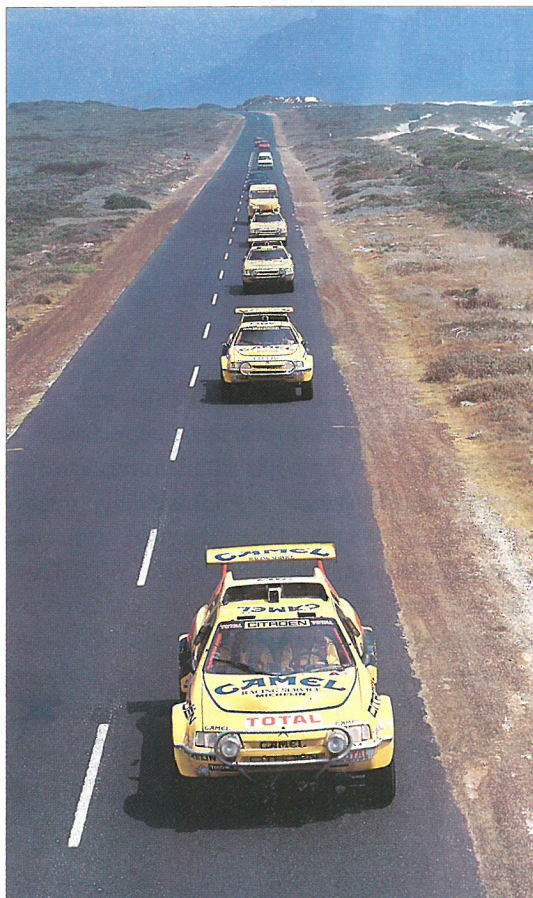
Capital: Pretoria.
Population: 37,600,000.
Area: 121,037 km².
Density: 31 inhabitants/km²
Languages: Afrikaans, English, numerous dialects. Inhabited successively by the Bochimans, Bantu, Dutch, Boers and English. Today the population is made up of 75% Bantu, 13% whites, 9% mixed race, and 3% Asians.
 South Africa is a former English colony, and a republic since 1984. The freeing of Nelson Mandela in February 1990 marked the beginning of the abolition of a Apartheid.
Resources: Precious stones, diamonds, gold, titanium, manganese, uranium, coal, iron, agriculture (corn, maize, vines, sugar cane), cat tle and poultry farming.
 * 1991 data.

Springbok, a lost village where fig trees and palms grow right up to the foothills of the arid mountains.

From here onwards the road stretches far and straight, and on

to Cape Town by the desert route. The road is lined with windpumps, but passers-by are rare: cattle, goats and the occasional black-and-white bird fluttering down from its enormous nest of dry grass perched pre-

cariously atop a telegraph post. A vast and beautiful landscape leading down to the Cape. Cape Town is Africa's southernmost city, a bustling university town, alive with culture. Noisy and modern, it is a patchwork of resi-



The Citroën ZX Rallye Raid took 4th, 5th, 6th, 7th and 9th places, thus confirming their high levels of performance and robustness.

NAMIBIA*

Capital: Windhoek.
Population: 1,740,000.
Area: 824,292 km².
Density: 1,6 inhabitants/km².
Languages: Afrikaans, English, German, dialects.
 Mainly populated by the Bantu (Herero and Hotentotts), with a Bochimian minority (an ethnic group dating from prehistory).
 Diamonds, zinc and phosphates make the Namibian subsoil the fourth-richest in Africa. Most townings have guttural sounding names, for the country was colonized by the Germans in 1884 and by the South Africans in 1919. Namibia gained its independence at the end of March 1990 (after 500 years of foreign occupation).

* 1991 data.

dential and business sectors. The town is also a thriving port and industrial centre, with high, impersonal tower blocks contrasting strikingly with the little churches and typical white washed houses.

Bougainvillea, hibiscus, cactus and pine trees flourish all along this cornice bordering the green and blue sea and stretching down to the Cape of Good Hope. It is impossible to be unmoved by the Cape: after crossing a nature reserve of 19,140 acres, lined with beaches of white sand, where peace and beauty thrive, we finally arrive at our journey's end, where Atlantic and Indian oceans come together at the tip of Africa.

AUTOMATIC GEARBOX FOR THE ZX

PRODUIT

When you drive through the congested streets of London, Paris or Madrid, did you realize you needed to change gear an average of every five seconds? The automatic gearbox is a godsend to city drivers and brings added comfort on the open road. Citroën recently added four new automatic models to its ZX collection.



Problems such as congested streets and endless traffic jams can make crossing the city a major headache for the motorist. The automatic gearbox cuts out repetitive gear changes and can bring a whole new dimension both to city driving and to motoring on the open road. Going automatic may not get you to that meeting across town any faster, but there's a good chance you'll arrive in a better state of mind...

THE MARKET

The market for automatic vehicles is growing, but is still relatively small in Europe and is concentrated towards the

top of the range. In 1991, automatics accounted for just 7% of the overall European market. By contrast, nine out of every ten cars have automatic transmissions in the United States, seven out of ten in Japan.

Within the European market, there are significant differences between Northern European countries and Southern European countries. In Switzerland, 20% of cars have automatic gearboxes, compared with 11.6% in Sweden, 10.9% in the United Kingdom, 9.4% in Germany and 8.2% in the Netherlands. At the other end of the scale, countries with a Mediterranean influence buy

CUSTOMER PROFILE

Automatic transmissions appeal to a quite specific clientele:

- *Customers are predominantly male (74% in France in 1990, 73% in the United Kingdom and 72% in Germany).*

- *The main socio-professional categories are management personnel (33%) and staff with higher education or technical qualifications (20%).*

- *In most major European countries, automatic and manual transmissions appeal to the same proportions of young people (35% under 35 in France, 34% in Germany and 21% in the United Kingdom).*

- *60% of the clientele use their vehicles both for city driving and longer distances.*

Automatic transmission offers clear benefits in terms of comfort when driving in the city, as well as added driveability on the open road.

substantially fewer automatics: 2.7% of the market in France, 1.7% in Spain, and 0.7% in Italy. The United Kingdom and Germany account for most of the automatics purchased over the last ten years in the five largest markets in Europe.

Citroën recently added four new automatic models to its ZX collection.

Two are petrol-engined: the ZX Volcane, powered by an XU9 JA engine (1,905 cm³, 122 bhp) and the ZX Aura with its smaller XU5 M engine (1,580 cm³, 89 bhp).

Both engines are petrol injection units fitted with three-way catalytic converters, so they will comply with the new European standards when they become compulsory on 1 January 1993.

The other two ZX automatics are diesel-engined models: the ZX Aura Diesel and the ZX Avantage, both powered by 1,905 cm³ XUD 9A engines developing 71 bhp. These new additions to the collection offer carbuyers a particularly extensive range of choices in this segment of the market. Diesels accounted for 40.5% of the seg-

ment in France in 1991, and the relatively uncommon combination of a high-performance Diesel engine and an automatic gearbox will be ideal for drivers looking for both drive ability and low cost motoring.

A gear selector with an integrated release button located on the central console is used to select P, R, N, A, 3, 2 or 1. To move from P to R, 3 to 2, A (for avant) to N, N to R or R to P, the release button needs to be pressed



while the gear selector is being moved. A light at the foot of the central console indicates the position selected at all times. Produced by ZF, the automatic gearbox (type 4 HP14) is a four-speed unit transversally mounted in the engine axis. Transmission is hydraulic in first and second gears, mechanical in fourth gear, and mixed (40% hydraulic, 60% mechanical) in third gear. All standard gear changes are entirely automatic. This transmission solution is in perfect keeping with the ZX's modern image. It underscores the

EUROPEAN ACCOLADES FOR THE CITROËN ZX

The Citroën ZX has already received no less than 16 awards in Europe. It was voted "1992 Car of the Year" by journalists in Denmark, Norway, Spain and Italy, and "1991 Car of the Year" by readers of the French motoring weekly Auto Plus.

intrinsic qualities of the Citroën ZX that the clientele has come to expect: harmonious styling with some of the best aerodynamics on the road, high-rigidity bodywork and robust, economical engines, a spacious, versatile interior with a sliding rear bench seat, a rear axle with its "programmed self-steering effect" (which enhances safety by providing a roadholding capacity that has become something of a benchmark in the industry) — as well as unrivalled driveability and comfort.

The automatic gear box gives a whole new feel to driving.

GOING FOR A SPIN

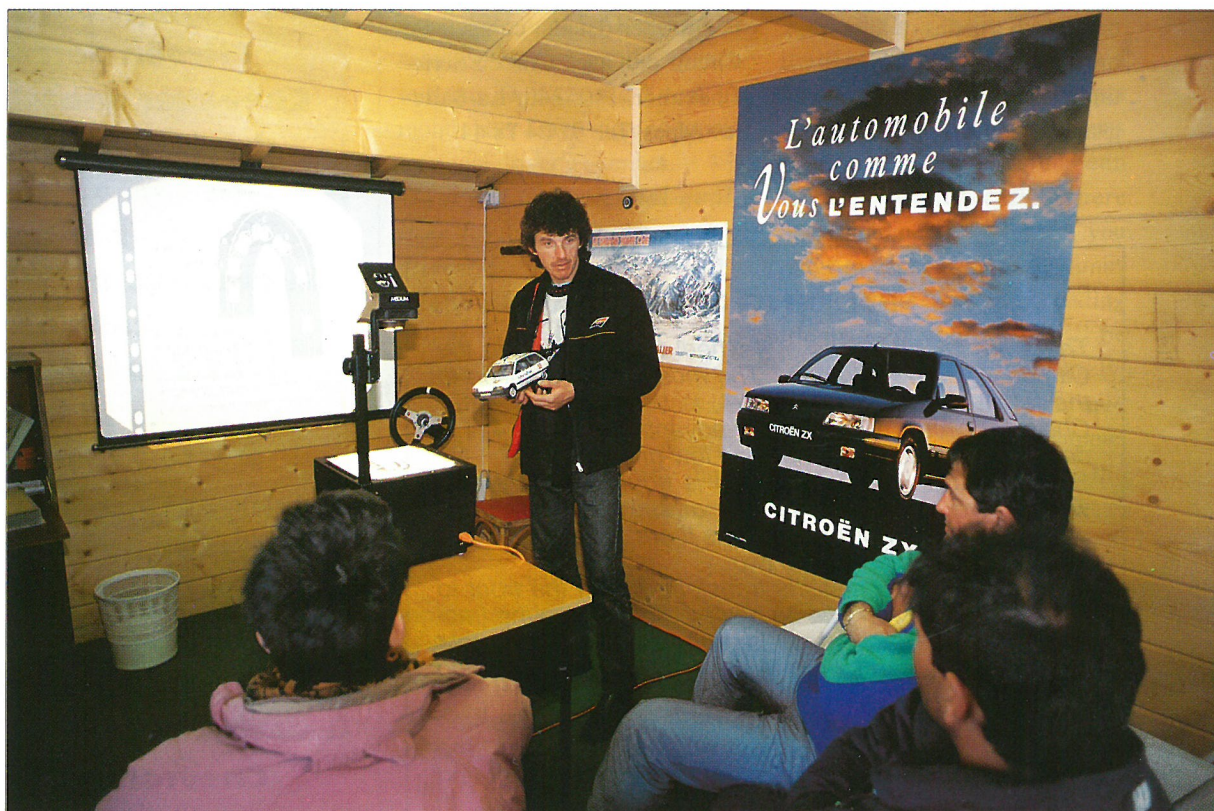
PASSION

The Citroën Serre-Chevalier winter driving centre was founded in 1971. On his return from the Monte Carlo rally, Claude Laurent decided to transform the small snow-bound airstrip of Serre-Chevalier into a “sports field” for his rally driver friends. The likes of Makinen, Waldegard and Thérier were all attracted to the centre for their own special “holidays on ice”. The first Ronde Hivernale competition was held here.

THE SCHOOL

Driving on ice is far from easy, and requires training in a variety of special manoeuvres. Claude Laurent offers theoretical and technical training courses, lasting from half a day to three days, fully suited to the customer's requirements.

An ice rink for cars, the circuit consists of a complete technical run of almost a mile, including a series of long hairpin bends. There are two separate tracks: the first is used for beginners' classes while the longer second track is reserved for the more experienced ice drivers. Claude Laurent's young team of five instructors includes a number of practising rally drivers. They bring their passion and enthusiasm for driving to the quality training that they provide.



HALF A DAY OF THEORY AND INITIAL PRACTICE

Lessons are held in the morning in the small teaching chalet. Trainees take careful note as the instructor gives them a 45-minute lesson, with diagrams and videos, on the basic rules for driving on ice. He teaches them how to hold the steering wheel, where to place their feet, the vehicle's weight shift, road holding, trajectory, the correct levels of braking and acceler-

ation, etc. After this first lesson, the trainees take the cars out onto the circuit to put the theory into practice. The initial aim is to acquire the reflexes that enable a driver to avoid getting into danger. The school uses Citroën ZX Diesels — “Volcane” and “Reflex” — and Citroën AX 4x4s, with ordinary studded tires and special ice-driving tires. For two circuits the instructor demonstrates what is to be practised, and then the student takes the wheel and “slides”

The Citroën Serre-Chevalier ice circuit is a real driving school. It provides complete training for people wishing to learn the simple manoeuvres of day-to-day and sports driving, while putting the emphasis squarely on safety.

into action. All cars are fitted with two-way radios, enabling the instructor to immediately correct any driving errors. In part two of the course, the instructor takes the passenger seat and the student practices slide trajectories and optimum braking techniques. Sudden braking on ice causes the vehicle to career out of control. To avoid this, the student is taught how to brake with a series of light steps on the brake pedal. Finally, a timed circuit lets the instructors test each trainee on the notions

acquired. At the end of the course, the students are given the Claude Laurent manual on the basic rules of controlled skidding. In 20 years the school has trained over 10,000 students in the pleasure of driving on ice. Today, an increasing number of companies are sending their employees to the Claude Laurent school to learn these special techniques.

For further details, contact: Le Circuit de Glace Citroën Serre-Chevalier, F-05240, La-Salles-Alpes. Tel: 92 24 78 44.

4X4: HOLDING THE ROAD

There are four versions of 4-wheel drive models in the Citroën AX and BX range. The most recent addition to the family, the Citroën AX 4x4, is used on the Serre-Chevalier circuit. What are the advantages of this 4x4 in dealing with road resistance and low-grip surfaces?

Saying that an off-road vehicle is equipped with four-wheel drive means that all four of its wheels are powered. The power driving the car is therefore applied to all four wheels, and not just to two.

On a steep slope, mass is transferred from the front to the rear axle. Given that on any type of surface the traction applied to each wheel is proportional to the weight supported, we can calculate the practical use of driving the rear wheels.

On a slippery, low-grip surface, driving any wheel too hard leads to tire-spin. If just one axle is driven, the vehicle is immobilized. Therefore, having both front and rear-wheel drive gives a car much better traction. In addition, when power is distributed over four wheels, each wheel is proportionately less powered, and the chances of tire-spin are therefore considerably reduced.

4X4

OPENING UP THE ROAD

The dynamic Citroën AX 4x4 is a remarkable go-anywhere car.

In two-wheel drive mode its manoeuvrability makes it the ideal town car. It will more than meet your requirements in road and motorway driving. And deep in the countryside or in mountainous terrain, you can put your Citroën into 4-wheel drive instantly and in any gear at the flick of a switch. Now no surface is out of bounds - those pitted and bumpy roads and low-grip surfaces (mud and snow) need hold no fear...

KEEPING C

For over twenty years, Claude Laurent has managed the Citroën Serre-Chevalier winter driving centre. This fan of ice-driving has an impressive list of qualifications: over a hundred victories in the world rallying championships, and thousands of miles covered as a navigator and competitive driver. Double Chevron looks more closely at the man in the driving seat...



ended rather less gloriously in three somersaults and a crash landing! But this incident only served to strengthen his passion for the sport.

From the moment he gained his full driving licence, Claude Laurent competed in all the regional rallies in his 4 CV, which he had bought second-hand and carefully prepared himself. A string of victories behind him, he was taken on to race for the DAF stable, where he remained for 11 years before moving on to Citroën and Peugeot for several

Son of a haulier, Claude Laurent discovered the passion for roads and driving from an early age. In 1952 he won his first rally behind the wheel of a 2 CV that he bought and prepared with his brother. At the age of 17, his first international rally

CONTROL



world championships. Interview: **What is your favourite memory?**

Claude Laurent: The first time I competed in the Le Mans 24-hour race with Lotus was in 1960, when I came top of the engine class (1300 cc). This was just a milestone event, however, my priority was always the world championship and endurance rallies, and the long-distance events like London-Mexico.

You drove for some of the leading stables, including Citroën. How did you break

into professional driving?

Claude Laurent: In quite an original way, actually! In 1964 a gymkhana event was organized in my part of France (Orleans). I



won the event in a small pickup truck ahead of Alfa Romeos and Porsches! I turned up for the final at the Montlhéry track in my small truck, but the managing director of DAF was at the race and offered me the chance to drive his car... and I won. A month later I was signing a professional driver's contract.

What are the essential qualities for becoming a racing driver?

Claude Laurent: In rallies you're racing against the clock. If you want to win you can't push the car too hard, you have to know how to drive aggressively without doing any damage to your vehicle. You have to be ready to deal with any obstacle, have perfect knowledge of the car, and know how to adapt to the weather conditions. If you can manage all of this then you will probably make a good racing driver.

This is all the more true when you compete in the long-distance events like London-Sydney, when you have to drive over 22,000 miles. That's half of a car's life gone, and you also

have to cope with the constantly changing types of terrain and climatic conditions.

What about driving on ice?

Claude Laurent: Driving on ice is quite a thrill. You really need to feel your car and constantly adapt to the changes in temperature. In mountainous regions the temperature can change very quickly. Where road holding is concerned, you have to get as close to the limits as possible without exceeding them — if you do, you'll be punished for it immediately. Driving on ice can be compared to skiing: you need to be supple, and be able to anticipate the route.

What advice would you give a driver in difficulty?

Claude Laurent: The first rule of driving: keep calm! Avoid sudden movements and never brake too hard as this can lead to the wheels locking and you will lose control of the vehicle. Second rule: carefully dose the brake and accelerator with a succession of light pedal presses.

What plans do you have in rallies and long-distance events?

Claude Laurent: I want to achieve a goal I set myself over 15 years ago! Paris-Beijing by road, passing through Moscow in the footsteps of Citroën's Croisière Jaune.

Every year on his circuit, Claude Laurent organizes "La Ronde Hivernale" event. This has become a classic in ice events, and over 100 great drivers gather to compete for the Andros Trophy.



PARTENAIRE

FROM OIL FIELDS TO OIL PAINTS

Total is present in every segment of the oil and gas market. The company supplies a full range of products with high added value to a clientele of industrial users and individual consumers.

Total is an international oil and gas group with presence in 80 countries. It generates 70% of its sales outside France. Total ranks among the top five petroleum groups in Europe and is one of the twelve largest worldwide.

A COMPREHENSIVE PRODUCT PORTFOLIO

Total's exhaustive product range includes LPG, jet propulsion fuel, petrol, wax, paraffin, lubricants, solvents, fuel oils and asphalt. The group markets a range of refinery products worldwide through an international network of service stations and through the intermediary of its industrial customers and wholesalers.

Total sold more than 50 million tonnes

of petroleum products in 1990 (38% in France, 22% elsewhere in Europe and 20% in the USA). Lubricating oils, the products most readily recognized by consumers, are produced in some 30 countries and sold in 70 countries through the company's subsidiaries in Europe, Africa, the USA and Southeast Asia.

TOTAL: FRANCE'S THIRD LARGEST CHEMICALS GROUP

The group's chemicals arm employs 24,000 people in 35 countries representing all 5 continents.

The group manufactures and markets a range of high added-value products to a clientele of industrial users and individual consumers:

. **Rubber** (39% of sales): India rubber is processed for use in specialized applications such as vibration reduction, power transmission and waterproofing; it is also used for consumer products such as gloves, shoes and boots.

. **Synthetic resins** (20% of sales): Synthetic resins form the basis of structural materials (moulded products and components for carmaking and shipbuilding) and coating products.

. **Inks** (19% of sales): No. 3 worldwide for the production of inks for printing, serigraphy, etc.

. **Paints** (13% of sales): No. 1 in France for the building industry and the DIY market, with high profile brandnames (Avi, Ripolin, etc.)

. **Adhesives** (9% of sales): The group manufactures products for motor vehicles, double glazing, building, leatherwork, packing, etc.

Total also has interests in chemicals. It manufactures and markets a range of high added-value products to a client-

ele of industrial users and individual consumers. The product portfolio includes inks, paints, adhesives, synthetic resins and technical rubber. India rubber is processed for use in specialized applications such as vibration reduction, power transmission and waterproofing; it is also used for consumer products such as gloves, shoes and boots.

UNLEADED PETROL ACCOUNTS FOR 40% OF SALES IN FRANCE

Total is France's leading producer of lead-free petrol, with 19% of the market. The company sells a top-quality product with a high octane rating. Producing environmentally friendly fuels requires a special refining technique known as isomerization. This involves taking light petrol and separating the high-octane fraction to form the basis of premium grade petrol.

For 24 years, Total has been a leading supplier of petroleum products to Citroën. The company is a sponsor of Citroën Sport and cooperates closely with the marque to develop lubricating oils and fuels for competition prototypes like the Citroën ZX Rallye Raid.



PENETRATING THE JAPANESE MARKET

With substantial quantities of oil and gas in the Middle East and Indonesia, it was only natural for Total to become a major supplier to the Far East, principally Japan. To establish a reputation in a country where lubricating oil is marketed under carmakers' brandnames, the group chose a strategy based on top-of-the-range products. Total became involved in motor-sport sponsorship to raise the profile of its high added-value products such as semi-synthetic oils. The company also struck an agreement with local distributors. Today, the group's entire product range is marketed through this network of representatives.

TOTAL: KEY DATA*

Workforce: 55,000, half of whom employed outside France.

Sales: FF 128.4 bn.

Production of crude oil: 22.3 million tonnes.

Production of gas: 8.4 billion cubic meters.

Quantity refined: 42.3 million tonnes.

Quantity of products sold: 57.2 million tonnes.

Oilfields: Middle East, America, North Sea, Indonesia, Yemen, Vietnam, Cuba, CIS.

16 refineries on 3 continents: Europe (France, Netherlands, UK), Africa (Cameroun, Côte d'Ivoire, South Africa, Gabon, Senegal), USA (Michigan, Kansas, Oklahoma, Colorado).

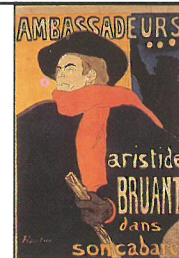
Service stations: 11,200 worldwide.

* 1990 figures.



Total produces some 47 million tonnes of chemical and oil-based products every year in 16 refineries either owned or part-owned by the group.

Toulouse-Lautrec, a timely celebration



Ninety years after his death, Toulouse-Lautrec is once again the talk of Paris. The “four-eyed blacksmith”, as Jules Renard called him, is the subject of a major exhibition at the Grand Palais scheduled to last three and a half months. Lautrec painted the colourful night-life of Montmartre at the height of the Belle Epoque. Although ahead of his time, this multi-talented artist was also ill-fated.

Henri de Toulouse Lautrec was born on 24 November 1864 in the Château du Bosc, in the shadow of the ramparts of Albi in southwestern France. A descendant of the Counts of Toulouse, young Henri could have lived the life of an aristocrat, spending his time hunting, fishing and riding. But fate took a hand. When he was two years old, two accidents in quick succession left him deformed by the age of fifteen.

So he devoted his life to drawing and painting, in which he quickly excelled. (He produced his first drawings at the age of seven.) Since he was denied a normal existence, he rapidly placed himself on the fringes of “proper” society. Lautrec arrived in Paris in 1882 to continue his studies. Three years later, he settled in Montmartre, where he became a regular customer of the dance-halls and cabarets (Rodolphe Salis’s Chat Noir and the Mirliton, run by the popular entertainer and composer Aristide Bruand; Lautrec illustrated Bruand’s songs and exhibited his paintings in the cabaret). He also became a frequent visitor of Montmartre’s numerous brothels. Here he discovered a life of easy pleasures and debauchery, which he immortalized in his drawings and paintings.

Lautrec loved women. But with the exception of one or two models who posed for him, women spurned the “little monster”. So he became a regular customer of the prostitutes and quickly set up home in the brothels. For

years he secretly painted these ladies of the night as they went about their daily occupations. Surrounded by warmth and affection, he was no longer “that dwarf” but Monsieur Henri or The Painter. When he became famous, he left this exotic world for his studio to paint the celebrities of the time. His subjects were the luminaries of Paris nightlife (Aristide Bruant, Lucien Guitry, Mounet Sully, Valentin le Désossé). The majority were women — Jane Avril, La Goulue, Yvette Guilbert and the female clown Cha-U-Kao — all of whom belonged to the world of entertainment that fascinated him so much. Many of Lautrec’s paintings were made into posters, and although they caused a scandal in the elegant salons of the day, they delighted the Parisian crowds. This poster art was revolutionary and contributed to the emerging techniques of the graphic arts. Today they stand as classics and are much admired by contemporary artists. Although he preferred the dancers of cabarets such as the Moulin Rouge to the *étoiles* of the Paris Opera, Lautrec was an artist in the tradition of Degas, whom he revered. But his approach was radically different. His

manner of portraying his subjects is more energetic and sarcastic to the point of caricature. He preferred drawing, and that technique emerges even in his easel paintings. When he arrived in Paris, he began to frequent the workshops of Bonnat and Fernand Coromon, where he acquired a mastery of his art and made a number of lasting friendships. He also met Van Gogh and painted his portrait. “Living is not always easy. But who cares? We



L'Automobiliste.

have to learn to put up with ourselves.” To apply that maxim, Lautrec turned to drink. His physical and mental health deteriorated rapidly. Two vignettes illustrate the sorry condition into which he had fallen. In the winter of 1898, he could be seen walking the streets with a china dog under his arm. He would also douse his workshop in oil to get rid of germs. And yet, one of his last (unfinished) works, a portrait of an old family friend, Paul Viaud dressed as a British admiral and painted in profile, shows no signs of the affliction that was eating him away. In February 1899, he was committed to a sanatorium following a bout of delirium tremens for detoxification. To convince his doctors that he was on the mend, he painted a series of circus scenes from memory. Released into the care of a member of the family, he continued to drink in secret. His artistic talents suffered. He would spend weeks producing a painting that otherwise would have taken him only a few days. In August 1901, he was stricken with paralysis. His mother took



Dressage des nouvelles par Valentin le Désossé.

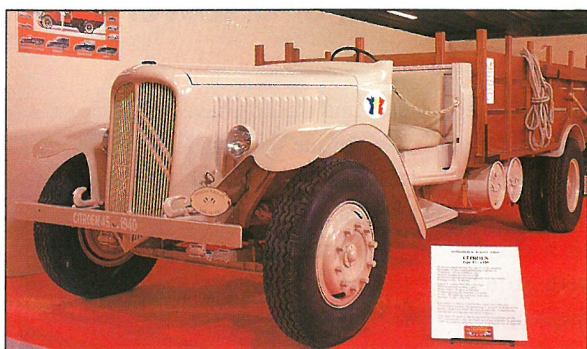
him into the family chateau. He died on 9 September 1901. He was 37, the same age as Raphael, Watteau and Van Gogh. His output was prodigious. He left 600 paintings, 300 lithographs, 50 posters and thousands of drawings.

His mother painstakingly collected a series of paintings and sketches, which she offered to the Louvre. The treasure was refused, and the collection finally found a home in Albi. Toulouse-Lautrec was trail-blazing poster artist. His manner of portraying his subjects, which introduced an element of emotion into the painting of the time, made him a precursor of expressionism. He revolutionized the art of illustration, devoting part of his career to lithography; he produced models for stage sets, illustrated theatre programmes and restored the

art of caricature to its rightful place. Today, more than ninety years after his death, the Grand Palais (22 February - 1 June 1992) the mecca of fine arts, is paying a timely homage to a universally recognized talent.

RETROSPECTIVE

A Type 45 at Rétromobile Salon



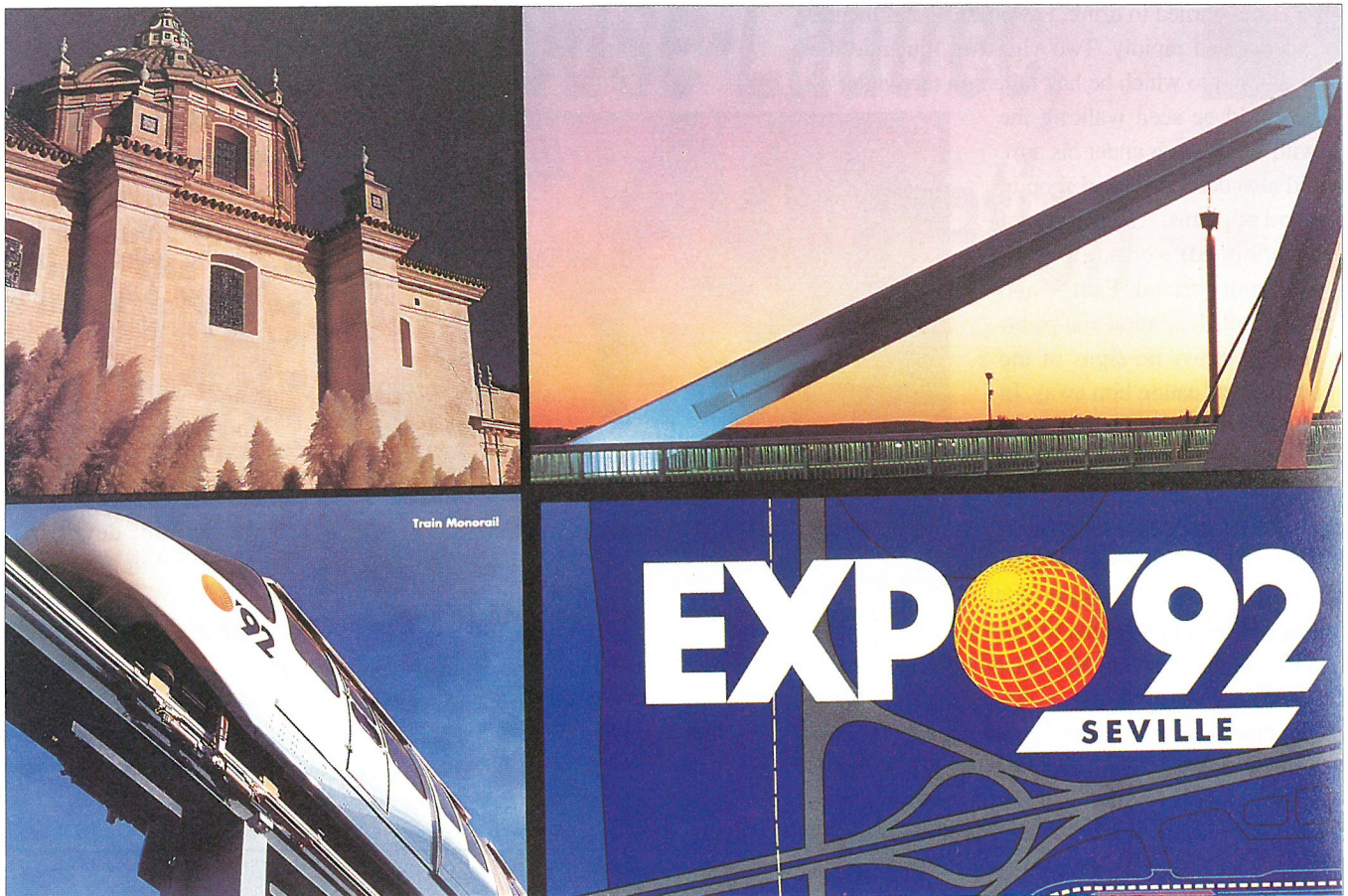
The Marius Berliet Foundation, which is officially recognized as serving the public interest, was set up to preserve and promote the history of French lorries and buses. Citroën was a leading manufacturer of lorries

**The
Marius Berliet
Foundation
is to exhibit a
1940
Citroën
Type 45
lorry
at
this year's
Rétromobile
Salon.**

between the two wars. The marque's range of goods vehicles enjoyed a dominating position in the French market. The vehicles were sturdy, basic and competitively priced, and the marque's dynamic sales network ensured that each model became the leader in its category. Citroën lorries were widely sold in western Europe and in the French colonies, where the marque enjoyed an outstanding reputation.

The Type 45 on show at Rétromobile, with the patent "Torpedo" cab and a stanchion body, was restored by a team of Foundation members for the 50th anniversary of General Leclerc's attack on Koufra, Libya, in January 1941.

Citroën's present-day range of goods vehicles includes the C15 and C25 vans.



A showcase for a new era

1492: Christopher Columbus discovers the New World.

1992: The Universal Exposition in Seville salutes the pioneering spirit down through the ages... and provides a showcase for a new era of discovery.

A legendary city with a thousand-year history, Seville lies in the heart of the Andalusia region in southernmost Spain. Now, Seville is playing host to one of the major events of the 20th century: the Universal Exposition. Officially opened on 20 April, Expo'92 will run until 12 October. The theme of the exhibition is discovery. This broad concept erases the barriers between space and time and showcases the manifold aspects of mankind's creative genius throughout the ages. More than 100 countries, 22 international organizations and 29 companies are taking part, offering visitors the chance to discover the marvels of science, history, tech-

nology and nature. Entertainment and the arts have certainly not been overlooked. The marque's Spanish subsidiary, Citroën Hispana, is featuring an exclusive presentation of its advanced vehicle manufacturing technology, with a ZX production line complete with soldering robots in action. A voyage of discovery from the past through to the future, Expo'92 is a cultural landmark that should not be missed.

For further information, call Coral in Seville on 95 429 00 92.



Breakaway: a weekend in Normandy

With summer just round the corner, the urge to get away from it all becomes overwhelming. The weekend provides an ideal opportunity to discover the highways and byways of rural France. The Calvados area of Normandy is the ideal place for a relaxing short break.



Although better known as a fiery apple brandy, Calvados is also a region of half-timbered cottages and rolling meadows full of cows grazing peacefully. But beyond its picture-postcard images, Calvados offers the visitor a wealth of leisure and sporting activities, together with a liberal helping of history.

THEME TOURS

The local tourist board has laid out a number of theme-based itineraries for pedestrians as well as motorists. Clearly signposted, each itinerary is based on a particular theme. They ramble down country lanes, through charming villages, along gurgling rivers and from valley to valley. But nothing is to stop the casual visitor from wandering off the beaten track to admire a timbered cottage, visit a church, gaze at the apple blossom... and

taste Normandy's rich cuisine featuring cream and butter.

Here is a selection of some of the excursions suitable for motorists:

- **La Route du Cidre:** visit the farms where the local farmers produce the famous Normandy cider. The circuit runs from Cambremer through the listed villages of Beuvron-en-Auge, Bonnebosq and Beaufour-Duval.
- **La Route du Granit:** Follow a 25-mile route through a the granitic region south of Saint-Sever. There are also nine clearly marked trails for hikers.
- **La Route des Artistes:** Seven local artists (painters, potters and sculptors) open their workshops to visitors.

LIVING HISTORY

History buffs will also have a field day. A specially signposted itinerary allows



THE CITROEN CAEN PLANT

Location

Cormelles-le-Royal industrial estate (4 miles outside Caen).

Production start-up: 1963.

Area

Built-up area: 1,812,110 square feet.

Landscaped area: 7,534,800 square feet.

Workforce: 2,300.

1991 output

Running gear for 688,656 vehicles.

1,573,379 transmissions.

1,970,546 spheres.

9,139,880 running gear components.

Techniques

Machining, welding, stamping, assembly, thermal treatment, painting and surface finishing.

Customers

Automobiles Citroën, Automobiles Peugeot and French and foreign subsidiaries of both companies; Chausson, Heuliez, Alpine Renault, Cimos (Yugoslavia), Olcit (Romania), Rolls Royce (UK), Sevel (Italy).

CALVADOS IN FIGURES

*Surface area:
2,142 square miles
(1/3 of the Lower
Normandy region)*

•
612,000 inhabitants

•
*County town: Caen
(114,000 inhabitants)*

•
*75 miles of coastline,
3,900 moorings*

•
*96 370 acres of forest
120,830 acres
of woodland
662 230 acres
of grassland*

•
602 hotels

•
131 campsites

•
*474 gîtes
(self-catering cottages)*

•
*Total number of beds:
239,046*

•
*12 golf courses
(including four 27-hole
courses)*

•
8 casinos

•
*3 seawater therapy
and fitness centres*

•
8 racecourses

them to retrace ten centuries of history, admiring the architecture associated with the Dukes of Normandy as they follow in the footsteps of William the Conqueror from Caen to the Mont Saint Michel.

In addition to the D-Day landing beaches and the museums devoted to World War II, Calvados is endowed with a wealth of cultural treasures. The most famous are the tapestry museum in Bayeux and the historical museum in Honfleur. Other, more unusual attractions include the balloon museum at Balleroy, the nature education centre at Caen, the mining museum in Le Molly-Littry, the international museum of model furniture in the Chateau de Vendevre and the Schlumberger museum at Crevecoeur-en-Auge.

A HOST OF LEISURE PURSUITS

Another exciting aspect of Calvados is the wide variety of leisure pursuits available to the visitor. The region is



synonymous with horses: racecourses, stud farms and horse shows form an integral part of the scenery. The resort town of Deauville is the venue for the famous annual sale of yearlings and the world polo championship. And there is no shortage of lakes and streams for rod fishing. Naturally, the seaside is a major attraction. Whether you are simply lounging on the beach, boating or windsurfing, the bracing sea air is as good as a tonic. For a more sedate pastime, try one of the twelve golf courses in the region. Or if it is thrills you are after, there is bungee jumping from the Soulevre viaduct (designed by Eiffel, no less) or rock climbing at Clécy. After a hard day's play, it is time to enjoy a well deserved rest. Once again, the choice is enormous, ranging from seawater therapy (at the Thalasso-Deauville centre) to cinema (Deauville will play host for the eighteenth year running to the American Film Festival). And since this is France, you can be sure the restaurants will offer a bewildering variety of local specialties, cheeses and seafood. The choice of accommodation includes campsites, hotels and self-catering cottages (*gîtes*). Or, for a special treat, try a night in a manor house or a chateau. Calvados really is a land of plenty. It is the ideal destination for a weekend away (alone or with the family), and is just a short ferry ride from the English coast.

For further information, contact Calvados Tourisme, place du Canada, 14000 Caen, France. Telephone: (33) 31 86 53 30.

■ AGENDA

Professionals

Fisita — the international automotive engineering association — will hold its 1992 congress in London from 7 - 11 June. The topics on the agenda this year include the vehicle and the environment, customer-centered technology and road safety and vehicle design. To enrol, contact the Société des Ingénieurs de l'Automobile in Paris. Telephone (33 1) 47 29 93 23; Fax: (33 1) 47 20 48 73.



On display

Track record

Geneva (5-15 March 1992): In addition to Citroën's electric car Citela and its four model-families, the marque presented its principal new releases for the

Swiss market, the Citroën ZX Automatic and the ZX Diesel.

Detroit (11-19 January 1992): The Big Three showed off their electric vehicles at the annual Motown car-fest: General Motors' "Impact", Ford's "Connecta" and Chrysler's "Dodge Epic".

Forthcoming events

Moscow (26-30 August 1992): The first international motor show to be held in the Russian capital will welcome more than one thousand companies from all over Europe and the USA. In addition to its Activa prototype, Citroën will be displaying its entire range of vehicles (AX, ZX, BX, XM, C15 and C25).

Paris (8-18 October 1992): The leitmotiv for this year's Mondiale de l'Automobile will be the different ways in which cars interact with people. One of the highlights of the 1992 show is a section specially reserved for off-road vehicles, complete with its own test track.



■ DIALOGUE

Colloquy

The third annual scientific colloquy, centered on modern-day production systems, was held at Paris's La Villette science park in April. In addition to presenting its own stand, Citroën chaired a round-table discussion focusing on its industrial system and new organizational structure.

Information

Citroën is maintaining its policy of forging links between the worlds of education and industry. Some 500 teachers will take part in training courses or one-day seminars on subjects as varied as quality, design, information technology, production engineering, marketing and communication.

■ CULTURE

The Arts and Entertainment



Forty top-range Citroën XM V6 and V6 24 Valve models, complete with chauffeurs, ferried the stars of the silver screen to the 17th César awards ceremony. Alain Corneau's musical masterpiece *Tous les matins du monde* swept the board. Jacques Dutronc was voted Best Actor for his role as Van Gogh in Maurice Pialat's eponymous film, while the Best Actress award went to Jeanne Moreau (see photo).

Yachting

Decked out in French livery, ten Citroën XM V6s accompanied France's yachting crew to San Diego to race for the America's Cup.



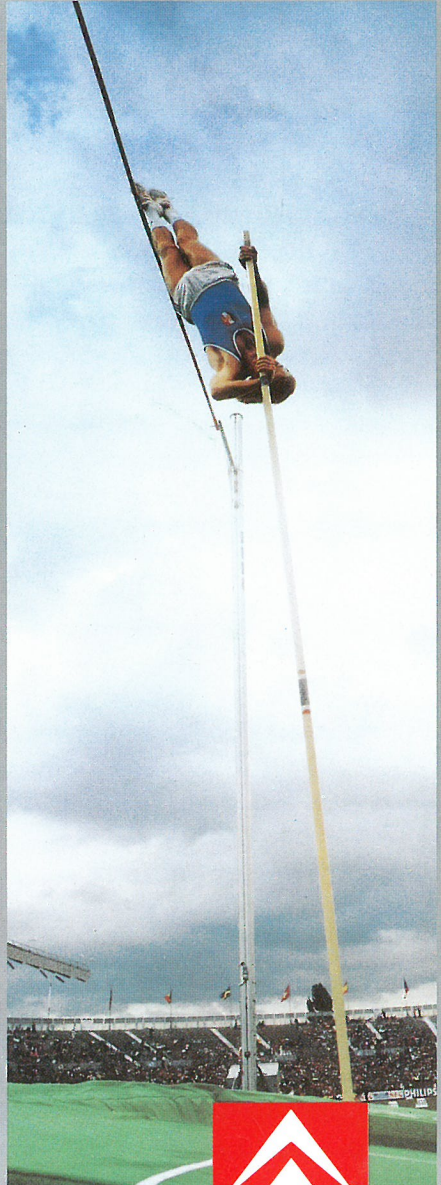
Reminder

The ninth international Citroën clubs reunion (ICCR) will be held in Denmark from 21 to 23 August. The event will attract Citroën lovers from all over the world. To find out more, write to 9th ICCR, Haarbyvej 3, Haarby, DK-8600 Skanderborg.

Masterpiece

After attracting record crowds in Amsterdam and Berlin, the Rembrandt exhibition visited London (26 March - 24 May). This exceptional event brings together for the first time 50 masterpieces — drawings and etchings — by the most influential Dutch artist of the 17th century.

"Objectif Barcelone"



CITROËN



Partenaire de la Fédération Française d'Athlétisme

Photos: Temp Sport