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P R E S S I N F O R M A T I O N

THE CITROËN ZX RALLYE-RAID

In 1989, Guy Frequelin announced that, although continuing to enter the AX for promotion-formula events and still contributing to the French Rally Championship network, Citroën Sport was turning its attention to Cross-Country Rally activities.

Citroën Sport's facilities, and its staff, have been reorganized to this end. At the same time, a number of world-famous drivers, including Ari Vatanen, Björn Waldegaard and Jacky Ickx, have been recruited. Last, but definitely not least, a long-distance rally prototype has also been produced: the Citroën ZX Rallye-Raid.

This vehicle —the Citroën high-level cross-country competition model— uses technical solutions common to the PSA group.

The Citroën ZX Rallye-Raid was first tested in the Almeria region of Spain in June. 1990 will be a run-up period for Citroën, during which it will enter the Baja Aragon and the Pharaohs Rally.

Camel, Total, Michelin and several other partners (A.I.S, Bilstein, Facom, Magnetti-Marelli-Solex, Mod'Plastia, Mondial Assistance, SKF, Speedline and Valeo) will provide powerful support for Citroën Sport during its competitive Cross-Country Rally activities.

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TECHNICAL CHARACTERISTICS OF THE CITROËN ZX RALLYE-RAID

ENGINE

Type: XU9T3

Position: transverse, rear-central, inclined 20° rearwards

Cylinders	: 4 in line
Cubic capacity	: 1905 cm ³
Bore x Stroke	: 83 x 88 mm
Compression ratio	: 7/1
Max power DIN	: 320 HP (235 kW EEC) at 5000 rpm with an inlet governor
Max torque DIN	: 51 mkg (490 Nm EEC) at 4000 rpm
Max speed	: 8000 rpm
Power/capacity	: 168 HP per liter
Torque/capacity	: 26.8 mkg per liter
Turbocompressor	: Garrett with separate relief valve
Supercharging pressure	: 2.2 bar
Heat-exchanger	: air/water

Construction

Aluminium alloy cylinder block
Removable cast-iron wet liners
Forged steel crankshaft running in 5 main bearings
Forged steel connecting rods
Light alloy pistons with lubrication gallery
16-valve light alloy cylinder head
Twin steel overhead camshafts driven by a toothed belt
Mechanical steel tappets
Dry sump

Fuel and ignition system

Air filter: dry cartridge
Variable-tuning (2 lengths) inlet manifold
Marelli-Solex electronic fuel injection
Fuel feed including a mechanical pump and an electric HP priming pump
1 central tank + 2 supplementary long-range tanks (total capacity: 450 l), complying with FT3 safety standards
AEI-Thomson transistorized ignition with solid-state distribution (2 coils)



Cooling

Water radiator with an aluminium cluster at the front of the car.
3 thermostatically or manually-controlled electric fans
Air-cooled oil cooler at the rear

TRANSMISSION

4-wheel drive

Clutch

Twin dry disk with ceramic-metal or carbon lining
Hydraulically-operated diaphragm thrust mechanism

Gearbox

Type: TJ, mounted transversely on the end of the engine
Six synchronized forward gears selected by a floor-mounted lever

Front and rear axles

8:39-ratio hypoid gears with self-locking differentials

Ferguson limited-slip central differential

Transmission shafts

Front and rear half-shafts with constant-velocity joints
A longitudinal transfer shaft, in steel or carbon fiber, between the front and rear axles

SUSPENSION

All-round independent, mechanical
Anti-roll bar at the rear

Front

Two spring/shock absorber units mounted on the upper wishbone

Rear

Two spring/shock absorber units and an additional shock absorber, all mounted on the upper wishbone



STEERING

Rack and pinion
Hydraulic power assistance with open-circuit central position
Steering wheel revs, full lock to full lock: 2.5

BRAKES

Separate front and rear circuits with load distributor valve controlled from the driver's position.
Independent hydraulic assistance on each circuit
4-piston callipers
Ventilated A.P. disks, 315 mm dia x 28 mm thick

DIMENSIONS

Overall length	:	4383 mm
Overall width	:	1784 mm
Height without the aerofoil	:	1623 mm
Wheelbase	:	2880 mm
Front and rear track	:	1510 mm
Ground clearance	:	242 mm
Weight	:	1350 kg

TYRES

Michelin 18/73 X 16
16-inch Speedline ventilated wheels

BODYWORK

2-door coupé
Bodywork in kevlar and carbon fiber
Rear aerofoil



CROSS-COUNTRY RALLY RULES

● Definition

There are four categories of Cross-Country Rally:

- "simple" Cross-Country Rallies, where the entire course is in the same country.
- "sprint" Cross-Country Rallies, where special sections total less than 500 kilometers.
- "Baja" Cross-Country Rallies, which have only a single special section whose length is limited to 1000 kilometers or twelve hours' driving.
- "marathon" Cross-Country Rallies, where the course covers several countries. The total length must exceed 10,000 kilometers and, unless specially authorized by the FISA, the time allocated must not exceed 15 days. There is no limit on the length of legs but special sections are restricted to 800 kilometers.

● Vehicles accepted

Three groups of vehicle are authorized to compete in Cross-Country Rallies:

T1: standard production cross-country vehicles of which at least 1000 identical units are produced in 12 consecutive months.

T2: "hotted-up" cross-country vehicles derived from group T1 vehicles.

T3: prototype vehicles, built as one-off units.

The Citroën ZX Rallye-Raid falls into category T3.



THE CITROËN SPORT ORGANIZATION

As a result of Citroën's entry into the world of Cross-Country Rallies, the Citroën Sport director, Guy Fréguelin, has taken on a number of new engineers and technicians to strengthen his team. The staff now totals 81 and should increase to 109 by 1991.

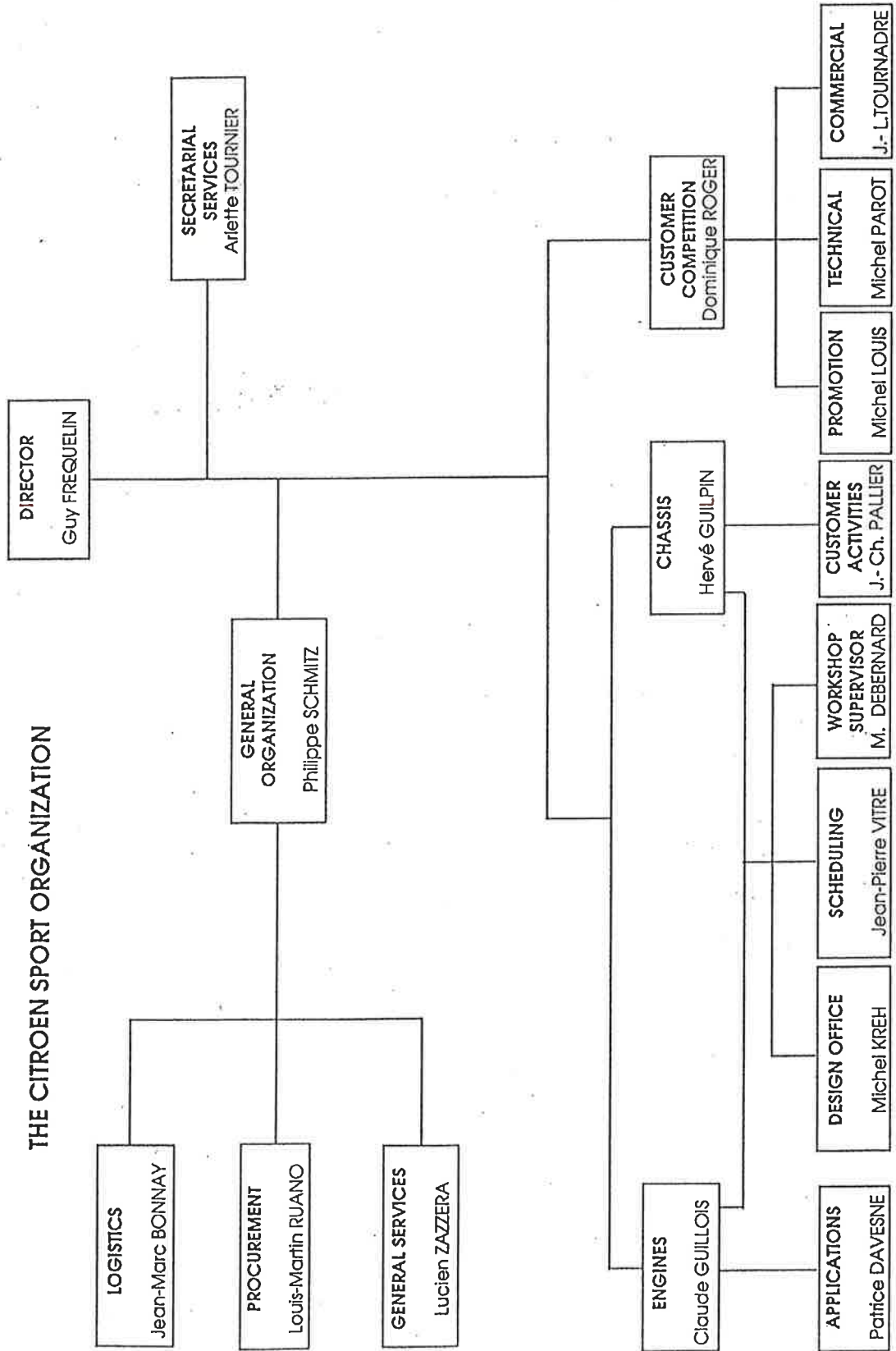
Citroën Sport comprises three departments:

- a "general organization" department, managed by Philippe Schmitz;
- a "technical department" in which Claude Guillois carries responsibility for engine design and Hervé Guilpin for the chassis, transmission, suspension and tests;
- a "customer competition" department, managed by Dominique Roger. This department develops promotion formulae, coordinates the activities of sporting networks in France and abroad and manages the boutique.

To accommodate this new organization, the facilities had to be modified and new offices and laboratories built (engine, gearbox, transmission, suspension, electrical and electronic laboratories).



THE CITROËN SPORT ORGANIZATION





Ari VATANEN

Born: 27th April 1952 at Tuupovaara (Finland)
Married, 3 children
Rally driver

Began driving in rallies, with an Opel Kadett, in 1971

World Rally Championship wins:

1980	Acropolis Rally	(Ford Escort)
1981	Acropolis Rally Brazilian Rally 1000-Lakes Rally	(Ford Escort) (Ford Escort) (Ford Escort)
	World Rally Champion	
1983	Safari Rally	(Opel Ascona)
1984	1000-Lakes Rally San Remo Rally R.A.C. Rally	(Peugeot 205 Turbo 16) (Peugeot 205 Turbo 16) (Peugeot 205 Turbo 16)
1985	Monte Carlo Rally Swedish Rally	(Peugeot 205 Turbo 16) (Peugeot 205 Turbo 16)

Other wins:

1976	Welsh Rally Manx Rally	
1977	Artic Rally Scottish Rally	
1978	Artic Rally Donegal Rally	
1987	Paris-Algiers-Dakar Pharaohs Rally	(Peugeot 205 turbo 16) (Peugeot 205 Turbo 16)



1988	Tunisian Rally	(Peugeot 405 Turbo 16)
	Atlas Rally	(Peugeot 405 Turbo 16)
	Pikes Peak Hillclimb	(Peugeot 405 Turbo 16)
	Baja Aragon	(Peugeot 405 Turbo 16)
	Pharaohs Rally	(Peugeot 405 Turbo 16)
1989	Paris-Tunis-Dakar	(Peugeot 405 Turbo 16)
	Pharaohs Rally	(Peugeot 405 Turbo 16)
1990	Paris-Tripoli-Dakar	(Peugeot 405 Turbo 16)

Bruno BERGLUND

Born: 13th February 1947 at Sunne (Sweden)
Married, one daughter
Lives in Sweden

Professional codriver since 1982

Wins with Ari Vatanen:

1987	Pharaohs Rally
1988	Tunisian, Atlas and Pharaohs Rallies, Baja Aragon
1989	Paris-Dakar and Pharaohs Rallies



Björn WALDEGAARD

Born: 12th November 1943 at Ro (Sweden)
Married, 3 children

Rally driver

Began driving in rallies in 1962, with a Volkswagen 1200

Took part in the Portuguese Rally in 1972 (TAP) driving a Citroën SM. Came 1st in group 5 and 3rd in the general classification

Wins in the World Rally Championship:

1979	Acropolis Rally Quebec Criterium 1st World Rally Champion	(Ford Escort) (Ford Escort)
1980	Ivory Coast Rally	(Mercedes 450 SLC)
1982	New Zealand Rally	(Toyota Celica)
1983	Ivory Coast Rally	(Toyota Celica)
1984	Safari Rally	(Toyota Celica)
1986	Safari Rally	(Toyota Celica)

Other wins:

1970	Monte Carlo Rally Swedish Rally	(Porsche 911) (Porsche 911)
1975	Swedish Rally San Remo Rally	(Lancia Stratos) (Lancia Stratos)
1976	San Remo Rally	(Lancia Stratos)
1977	Safari Rally Acropolis Rally RAC Rally	(Ford Escort) (Ford Escort) (Ford Escort)



1978	Swedish Rally	(Ford Escort)
1986	Qatar Rally	(Toyota Celica)
1987	Hong-Kong-Pekin Rally	(Toyota Celica)
1989	Dubai Rally	(Toyota Celica GT4)
1990	2nd in the Paris-Tripoli-Dakar Rally	(Peugeot 405 Turbo 16)

Fred GALLAGHER

Born: 16th April 1952 in Belfast
Married

Was codriver for Henri Toivenen, then Kankkunen

Has been Björn Waldegaard's codriver since 1986

Wins:

1985	Safari Rally Ivory Coast Rally	(with Kankkunen) (with Kankkunen)
1986	Safari Rally Ivory Coast Rally	(with Björn Waldegaard)
1987	Hong Kong - Beijing Rally	(with Björn Waldegaard)
1990	Safari Rally	(with Björn Waldegaard)



Jacy ICKX

Born: 1st January 1945
Married, 2 children

Started circuit-racing in saloon cars in 1965 (Ford Lotus Cortina) and then quickly progressed to F3 in 1966, F2 in 1967 and F1 in 1968

8 wins in the Formula 1 World Championship

1968	French GP	(Ferrari)	4th in the Championship
1969	German GP Canadian GP	(Brabham) (Brabham)	2nd in the Championship
1970	Austrian GP Canadian GP Mexican GP	(Ferrari) (Ferrari) (Ferrari)	2nd in the Championship
1971	Dutch GP	(Ferrari)	4th in the Championship
1972	German GP	(Ferrari)	

In parallel with his Grand Prix racing, Jacky pursued a career in Prototype Sport and has roughly fifty wins to his credit, including 6 in the Le Mans 24-hour race

1969	Ickx - Olivier	(Ford GT40)
1975	Ickx - Bell	(Gulf GR8)
1976	Ickx - Van Lennep	(Porsche 936)
1977	Ickx - Barth - Haywood	(Porsche 936)
1981	Ickx - Bell	(Porsche 936)
1982	Ickx - Bell	(Porsche 936)



Jacky first entered the Paris-Dakar in 1981, driving an official-entry Citroën CX. He won in 1983 (Mercedes), came 2nd in 1986 (Porsche), 5th in 1982 (Mercedes) and 6th in 1984 (Porsche).

1989 Ickx – Tarin (Peugeot 405 Turbo 16)
2nd in the Paris-Dakar
Won the Baja Aragon

Christian TARIN

Born: 19th April 1951 in Eherbeek (Belgium)
Electronics engineer
Boeing 737 Learjet pilot instructor

Began mechanical sports (motocross and trial) at the age of 18

At 21, one of his more notable achievements was a 3rd place in the 24-hour Francorchamps race (World Endurance Championship).

He has piloted support aircraft for 4 Paris-Dakar Rallies.
Was codriver for Jacky Ickx in 3 Paris-Dakar Rallies, first on Lada and then Peugeot 405 Turbo 16.

**Speech by Monsieur Bernard ROCHE,
Assistant Managing Director of AUTOMOBILES CITROEN,
during the presentation of the
CITROEN ZX RALLYE-RAID to the International Press**

I would first like to say, on behalf of M. Calvet and the Citroën Management, how pleased I am to see you all again after our last meeting in December 1989.

Thank you all for accepting our invitation: the fact that so many have come shows how interested you all are in our new long-distance rally model, the Citroën ZX Rallye-Raid.

Is there a single major car manufacturer who is not now closely or loosely, directly or indirectly, involved in automobile sports?

I think not! It is therefore only natural and, moreover, completely in line with the Group's strategy, for Automobiles Citroën to return to high level sport, both to affirm its identity and its image.

But what was the best formula, the best type of sport?

As we explained previously, Automobiles Peugeot has decided to move to the World Sport Prototype Championship and Automobiles Citroën consequently decided to resume its earlier activities, which gained it such prestige, that is to return to the world of Cross-Country Rallies. Nobody can have forgotten the success of the DS and the SM in numerous rallies, particularly African rallies - in fact, the Paris-Dakar before the Paris-Dakar existed.

A few details on our objectives.

Automobiles Citroën, through Citroën Sport, is going into Cross-Country Rallies with one obvious aim: TO WIN. We are professionals completely committed to winning and are taking all the measures necessary to succeed, although we are fully conscious of the difficulties we shall meet and will have to overcome: difficulties which will arise with the machine itself, however careful we are and however skilled our team, to which must be added the difficult environmental conditions and human problems, even though our men are amongst the best and most highly skilled anywhere.

We can say that 1990 will be an apprenticeship for Automobiles Citroën, its team and its cars because we shall need to:

- set up a new team from scratch, in only one year and then bring it up to full efficiency under unusual and difficult conditions,
- use new equipment which may be more or less unfamiliar to us,
- keep calm and collected in the midst of excitement and stress, etc.

This cannot be improvized and will not be a one-day job!

1990 will, therefore, be a "running-in and tuning" year for the men just as much as for the car. We shall be seeing the first steps of a tightly-knit team determined to get to the top.

These, briefly, are our reasons for entering the 1990 Baja Aragon and Pharaohs Rally.

The 1991 season will open with the Paris-Dakar and we hope to be at our maximum potential when we enter this difficult, dangerous event.

1991 will, therefore, be Citroën's first full season in the Cross-Country Rally Championship recently founded by FISA - the International Automobile Sports Federation.

After these few words on our programme and our objectives, we must now move on to the third part of this presentation —doubtless that in which you are most interested— our new product.

In a few moments, we shall get our first glance at the Citroën ZX Rallye-Raid.

It does not look like an AX, nor a BX nor an XM and yet is obviously Citroën: there is no room for mistake. Once we decided to enter high-level competition, it was vital to give our car a highly personalized line. Nonetheless, the bodywork of the Rallye-Raid obviously had to satisfy certain requirements specific to the race environment. After much careful investigation, our styling office came up with the solution we are presenting today: the Citroën ZX Rallye-Raid.

It is a racing prototype and, obviously, adapted to its ambitions. However, we have also attempted to give it a special esthetic, an eye-catching style evocative of both beauty and force.

To conclude, today is the start of a new adventure for us. Automobiles Citroën is entering automobile sport with a newfound determination. It goes without saying that we wish the Citroën ZX Rallye-Raid every success in all areas of international competition.



COMMUNIQUE BY CAMEL

CAMEL and CITROËN are joining forces for 1990 and 1991

Following its successes with Peugeot Talbot Sport in the 1987 and 1990 Paris-Dakar Rallies, RJR-Nabisco, Inc. represented by its Camel trademark, has decided to support Automobiles Citroën during the 1990 and 1991 Cross-Country Rally seasons.

Peugeot Talbot Sport has now decided to devote its attentions to other activities and, consequently, the cooperation between Camel and the PSA group, which began with the Ari Vatanen's win in the 1987 Paris-Dakar in a Peugeot 205, will now continue through Citroën Sport.

"Citroën has decided to go for the highest levels in the sport and I am particularly pleased that our very fruitful partnership with PSA will continue" said the R.J. Reynolds International Inc. Sponsoring and Special Events Manager W. Duncan Lee.

He added "Like Peugeot Talbot Sport, the Citroën Sport team, managed by Guy Fréguelin, has a very professional approach and its projects seem extremely promising".

Citroën Sport and Camel will join forces for the last two events in the 1990 Cross-Country Rally season —the Baja Aragon in July and the Pharaohs Rally in October. The Paris-Dakar will open the 1991 season, during which Citroën Sport and Camel will enter all the events.

"I am very enthusiastic about this new association and convinced that our joint efforts —proof of the loyalty of both PSA and R.J. Reynolds International Inc.— will meet with success" concluded W. Duncan Lee.