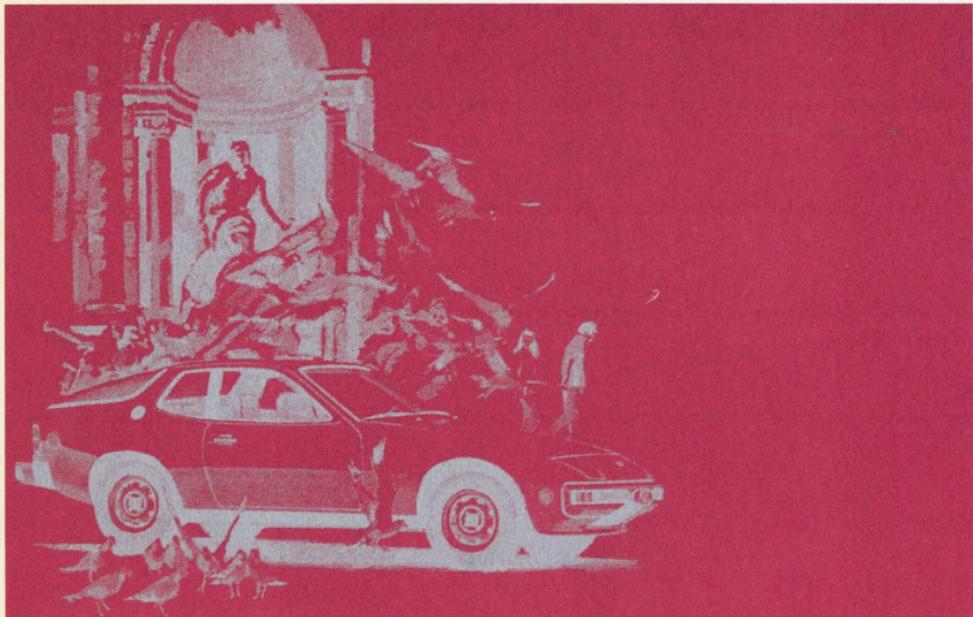


924

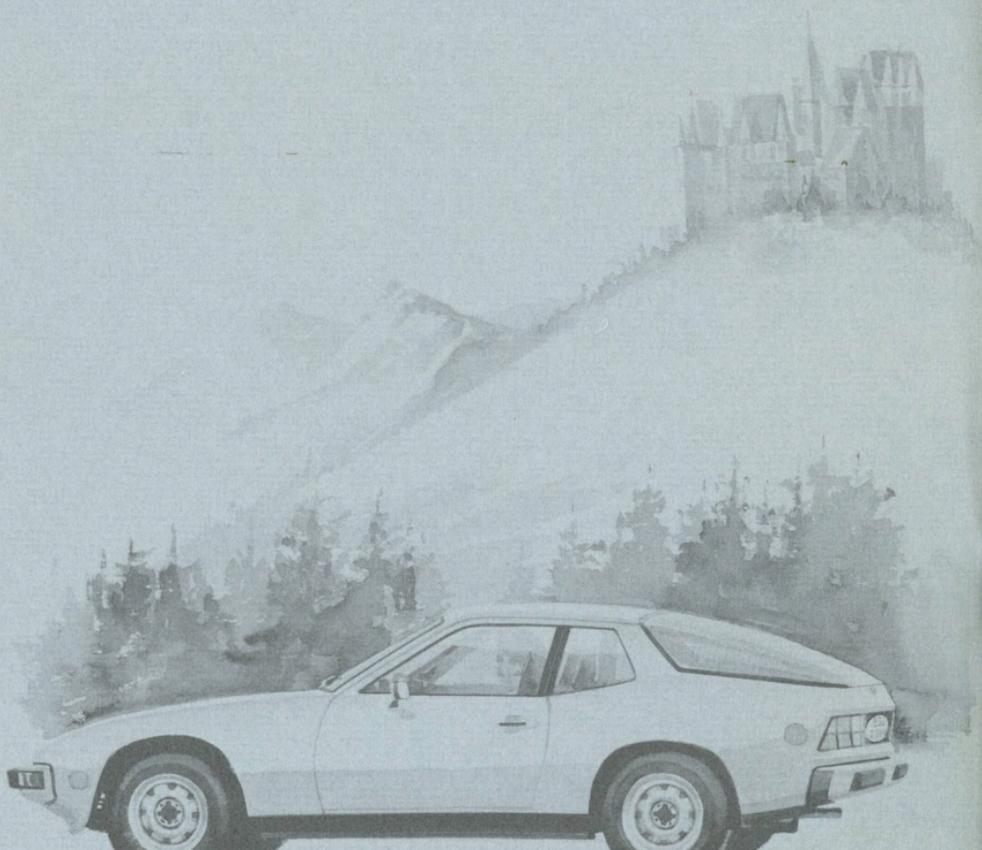


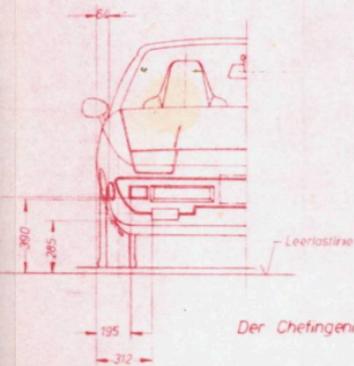
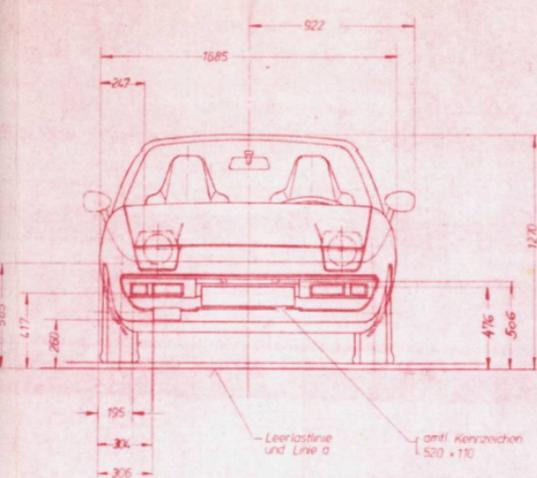
REALIZED.

Porsche creates a new Porsche.

THE CHALLENGE

Develop a thoroughbred
sports car for everyday driving.





Der Chetingenieur

Gezeichnet für zul. Gesamtgewicht

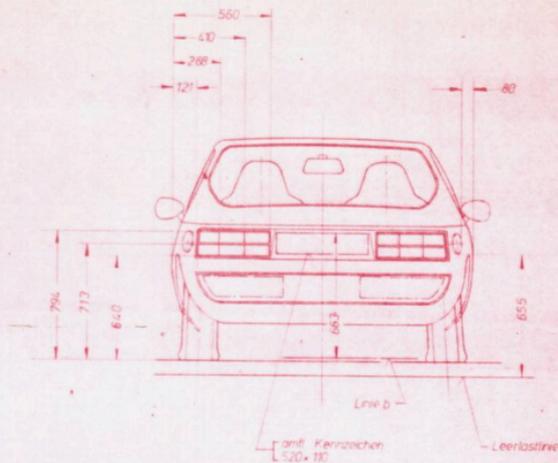
Maßstab 1:20 Bezeichnung 4 5.4.75 Blatt

Dr. Ing. h. c. F. Porsche
Aktiengesellschaft

PKW Typ 477

Z-Nr

477 000 111 A



Fahrgestell-Nr. —

Motor-Nr. —

Typschild —

Gewichte :

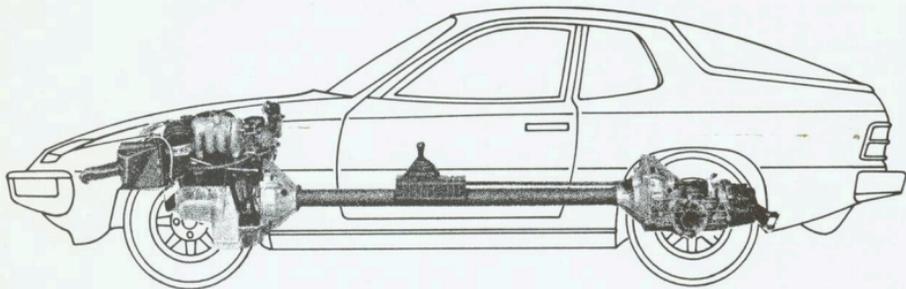
Leergewicht Schaltgetriebe : 1050 kg
 ca. 37,5% M Ausstattung : 1080 kg
 zulässiges Gesamtgewicht : 1400 kg
 zulässige Achslast vorn : 650 kg
 zulässige Achslast hinten : 820 kg
 ca. 75% M Ausstattung :

	USA-Ausf.		USA-Ausf.
21 Verg.	21 KJ	21 KJ	21 KJ
105 PS	100 PS	125 PS	125 PS
1050 kg	1110 kg	1050 kg	1110 kg
1080 kg	—	1080 kg	—
1400 kg	1390 kg	1400 kg	1390 kg
650 kg	650 kg	650 kg	650 kg
820 kg	820 kg	820 kg	820 kg
	1190 kg		1190 kg

THE 924 ANSWER...

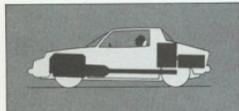
Transaxle design concept for...

- Balanced weight
- Neutral handling
- Space efficiency



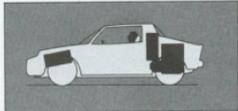
The development of the 924 presented a demanding challenge—even for Porsche. How to develop an automobile with the responsiveness of a thoroughbred at an affordable price. Clearly, this required a new level of design efficiency. The answer—the Transaxle design concept. The most singular attribute of the new 924.

The Transaxle offers a number of design potentials that Porsche engineers were able to translate into important driver benefits. And that is what this car is all about. The Porsche 924 is a driver's car, designed to respond instantly and predictably to the driver's command. Porsche 924. A design challenge... REALIZED.



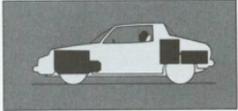
Conventional Design

(Front engine and transmission, rear wheel drive.) Weight concentrated over non-driving wheels results in poor traction. Rear wheel brake efficiency varies under different loads.



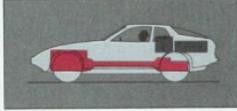
Rear Engine/ Rear Wheel Drive

Weight on rear driving wheels. Good traction. Good braking performance. Split luggage compartment limits ability to carry large objects.



Front Engine/ Front Wheel Drive

Good space efficiency. Center of gravity far forward. Good configuration for a sedan type. Brake force regulator desirable.

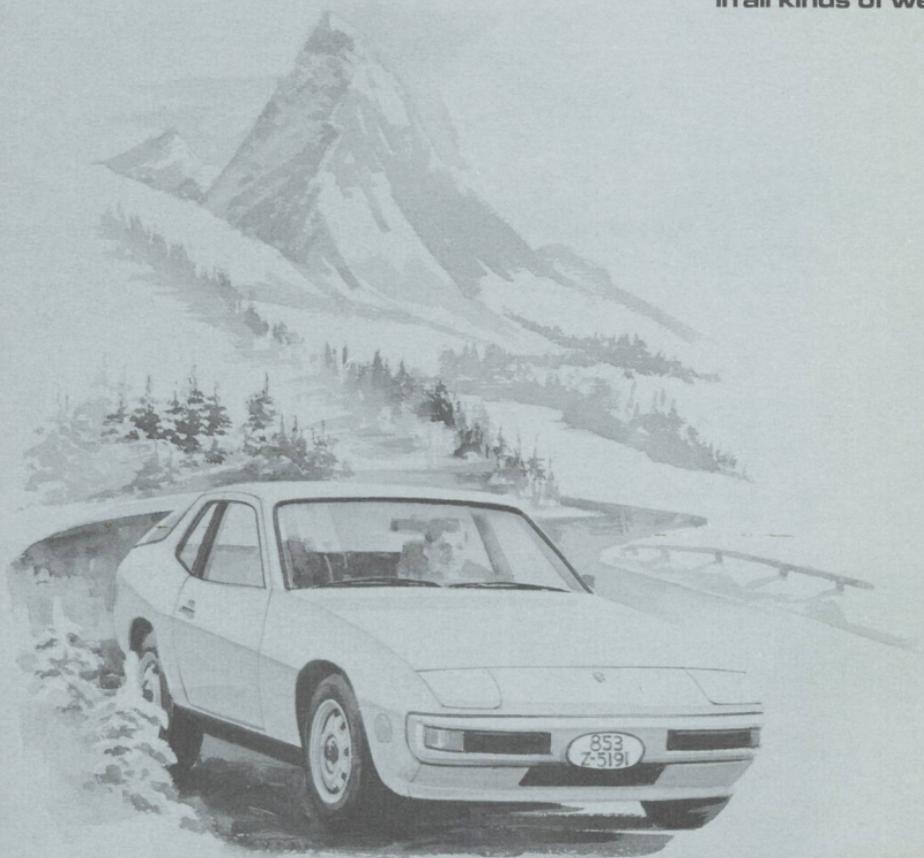


Porsche 924 Transaxle

(Front-mounted engine and clutch, rear-mounted transmission and differential). Balanced weight distribution. Space efficiency. Large, accessible luggage compartment. Good braking and neutral handling.

NEEDED

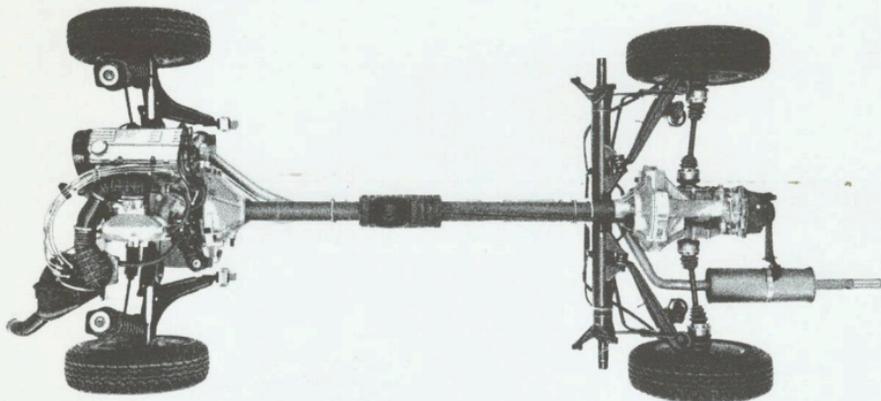
Consistent handling and road holding characteristics on various terrain in all kinds of weather.



THE 924 ANSWER...

Transaxle design with 4-wheel independent suspension for...

Superb road handling Comfortable ride Sure tracking

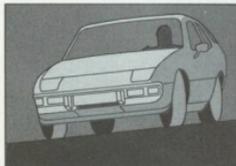


The balanced weight distribution inherent in the Transaxle design, combined with Porsche's advanced 4-wheel independent suspension system, accounts for the superb road manners of the 924.

Under rough road conditions, in high-speed turns, under severe braking . . . the Porsche 924 is a driver's car that hugs the road as only a Porsche can. Under

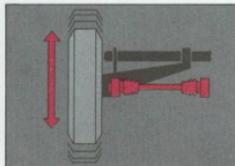
all-out testing on the skid pad, the 924 rivals any sports car in potential cornering speed.

Engineered in the true Porsche tradition, the 924 also features such refinements as independent rear suspension combined with McPherson strut front suspension to provide a sporty, yet comfortable ride.



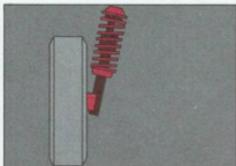
4-Wheel Independent Suspension

Allows each wheel to respond independently to changes in the road's surface. Keeps the 924 firmly on the road and the driver in control.



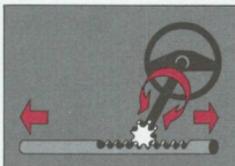
Minimal Camber Change Rear Suspension

Triangulated trailing arms and solid torsion bars minimize camber change throughout wheel travel for a balanced, controlled ride.



McPherson Strut Front Suspension

An advanced, compact, precisely tuned system using coil springs. Matched with the rear suspension it combines performance and comfort.



Rack and Pinion Steering

Effortless maneuverability. Precise road feel. High-speed accuracy. Lets the driver experience the thrill of Porsche driving.

NEEDED

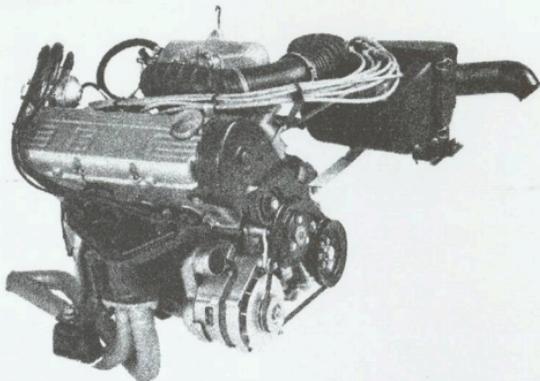
A high level of total performance
coupled with great flexibility.



THE 924 ANSWER...

Efficient, aerodynamic styling with a modern powerplant for...

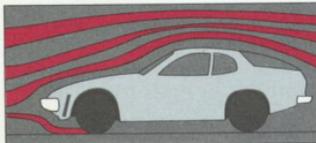
Low air drag Responsiveness High-speed capability



Aerodynamics contributes significantly to total performance. And the 924 represents the latest product of Porsche research and design engineering in combining pleasing good looks with greatest aerodynamic efficiency. An example of typical Porsche engineering and development in detail is the positioning of the high-performance radiator. It provides positive cooling in the face of high performance demands, yet retains the 924's efficient, aerodynamic styling.

The Porsche 924 engine is a 2-liter, liquid-cooled 4-cylinder unit featuring CIS fuel injection for flexible power and low fuel consumption. An overhead camshaft with notched belt drive reduces valve train inertia. The engine develops 109.2 lb/ft of torque at 3000 rpm.

Flexibility in the lower and middle rpm ranges is the engine's most impressive characteristic... of particular value in city traffic.



Total Performance Styling

Wind tunnel tested. Clean, streamlined design reduces air drag.



Smooth... Unrestrained... Powerful

Maximum torque at 300 rpm—remains virtually unchanged over a wide range. Good acceleration. Smooth response.



Fully Synchronized Transmission

Porsche's unique servo-thrust synchronization let's you shift as fast as your hand can move.

Economy? Embarrassingly high.

Official EPA Estimates with standard transmission—City... 17 mpg, Highway... 31 mpg.* Your actual mileage may vary depending on how you drive, optional equipment and condition of your car. Estimated mileage slightly lower in California.

NEEDED

A degree of active safety
that goes beyond
accepted standards.



THE 924 ANSWER...

Driver control as a design principle for...

Responsiveness Control Maneuverability in critical situations

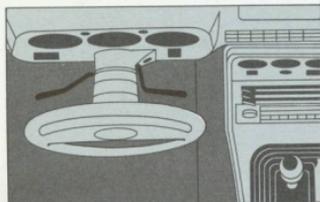


The Porsche philosophy requires that every design effort be made to prevent an accident before it occurs by putting the driver in complete control. This philosophy of "active safety" is reflected throughout the 924.

The cockpit design offers outstanding driver position. The instruments and gauges are large and easy to read to prevent distraction, and clean, expansive glass areas

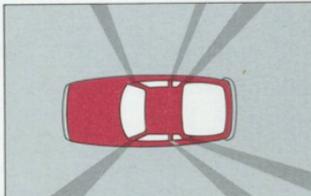
improve visibility.

If an accident should occur, a combination of passenger restraints and energy absorbing systems helps protect occupants. The double-jointed steering column with telescoping section limits rearward displacement. The solidly connected power and Transaxle units are designed to assist in absorbing energy of front and rear end collisions.



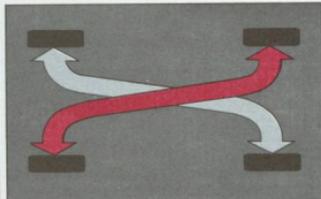
"Hands-On" Control of 6 Key Driving Functions

The driver can operate 6 frequently used convenience and safety items like windshield wipers and washers, directional signals and headlights without taking his hands from the wheel or his eyes from the road.



Air-Swept Visibility

The aerodynamic styling of the 924 provides a natural air wash of the windshield to maintain good visibility. As a further refinement, a recess incorporated into the windshield side molding traps and diverts water away from the side windows.



Diagonal Dual Braking/ Negative Steering Roll Radius

A dual-circuit, servo assisted disc/drum braking system. Each circuit connects one front wheel and the opposite rear wheel. The combination of diagonally connected independent circuits and negative steering roll radius insures emergency stopping with directional stability.

NEEDED

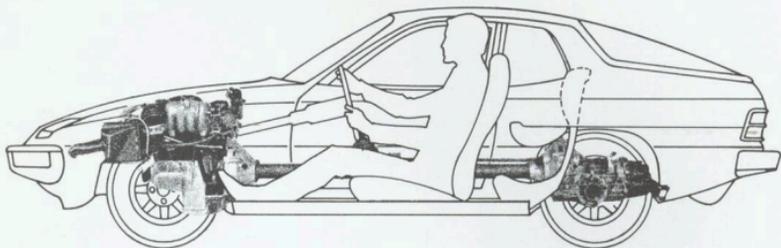
A level of comfort and convenience
beyond sports car traditions.



THE 924 ANSWER...

Human factors engineering for...

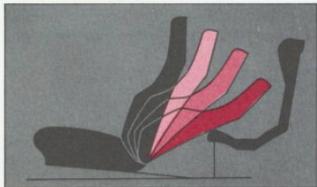
- Ease of entry
- Good seating and driving comfort
- Good ventilation
- Non-glare interior
- Large and easily accessible luggage compartment



The logical answer to sports car driving needs should combine a high standard of performance and maneuverability with good seating and driving comfort. Add to this a luggage compartment that can be easily extended and you have the Porsche 924.

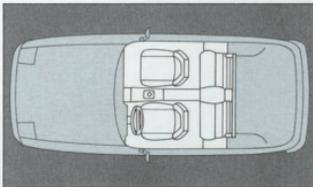
With the 924 Transaxle design—front-mounted engine and rear transmission—you free maximum interior space for driver and passenger comfort and convenience.

In the 924, you can feel comfortable in any driving situation. The front seats are firmly contoured and covered in attractive leatherette with plaid cloth inserts for all-weather comfort. Access to the luggage compartment is convenient with the easy-to-lift rear windscreen. Additional luggage and storage space is achieved by folding down the rear compartment back.



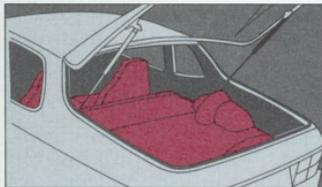
Individually Reclining Seats

Individual reclining seats for the driver and passenger are standard. Fore and aft adjustments are easy. Vertical support is good even in high-speed turns.



Large Passenger Compartment

Porsche's unique design achieves maximum interior space. The sun roof option feature adds still further to occupant comfort and driving pleasure.



Large, Versatile Luggage Compartment

The rear window swings up when unlatched to reveal a large luggage compartment. This compartment can be extended for long articles by folding down the rear compartment back.

NEEDED

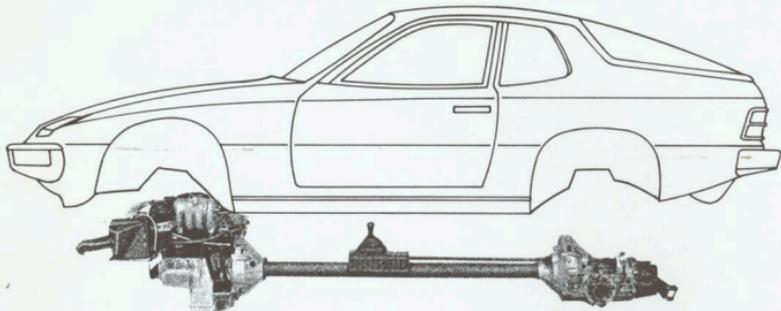
A sports car design with
low cost serviceability.



THE 924 ANSWER...

Service-conscious construction for...

- Ease of service accessibility
- Extended service intervals
- Maintenance-free systems

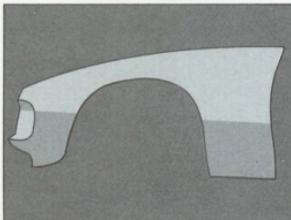


The 924 offers an extremely "repair-friendly" design. Body construction is such that repairs can be carried out quickly and at minimum cost.

The entire power train, including engine and Trans-axle, is mounted as one unit to the body shell, and can

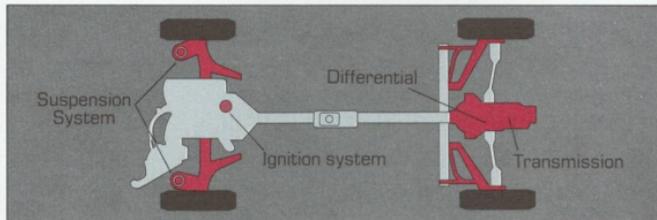
be removed with comparative ease for major repair work.

The unitized body is designed to permit sectionalized replacement of panels to keep repair time and expense to a minimum.



Bolt-On Body Panels

Certain components such as front fenders, hood and doors bolt on for rapid, simple replacement and reduced repair and service costs. Body parts can be replaced in sections.



Long-Life Chassis Components

The 924 has reduced costly service time by reducing the number of components requiring frequent service. The breakerless ignition system and the front and rear suspension systems require no lubrication or routine maintenance. The standard shift transmission and differential are permanently filled and do not require lubrication services.

Minimal Required Maintenance

Maintenance costs have been carefully taken into design consideration. Engine oil changes are normally recommended only every 7,500 miles or 10,000 km, and inspection services every 15,000 miles or 20,000 km. (See Owner's Manual.)

NEEDED

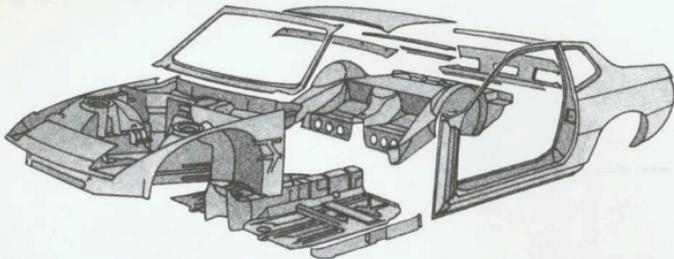
A better approach
to the problem of rust.



THE 924 ANSWER...

Galvanized body parts and proven production techniques for...

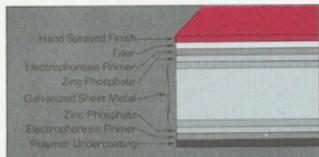
Long-lasting appearance Reduced cost of ownership Greater retained value



The lower body shell of the 924 is constructed of galvanized sheet metal spot-welded by hand. Since each part is galvanized before assembly, rust formation is inhibited even in concealed areas. Anodized aluminum rain gutters are even employed to protect exposed drainage areas.

During assembly, each raw body shell must pass through 80 inspection stages. Spot welds are examined for proper placement, mechanical separation tests are performed, and templates are used to determine proper

fitting of doors, hood and rear window. During each shift, one complete body shell is randomly selected and subjected to numerous individual measurements. Every 924 body is also subjected to spray booth water tests to insure a tight body structure. After final assembly, the car is again examined by a team of six Porsche inspectors to assure the finished product measures up to the exacting standards and fine tradition symbolized by the Porsche nameplate.



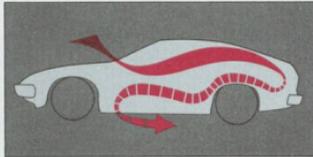
4-Step Body Finishing

Zinc phosphate is first applied to the body shell to protect the metal against corrosion. The entire body is then dipped into a vat containing primer. The primer is attracted to the body by a process similar to electroplating. This assures a smooth coating on all interior and exterior surfaces and edges. A filler is then applied and the final color coat is sprayed by hand.



All-Welded Unitized Construction

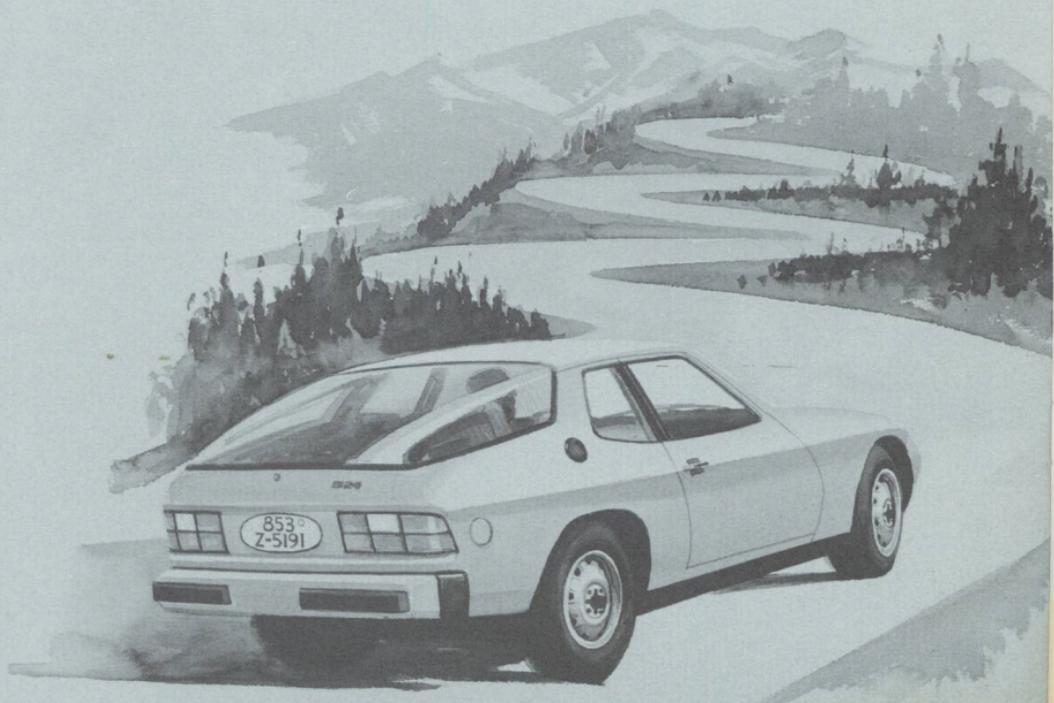
The 924 body is unitized to inhibit noise and vibration, combining maximum structural strength with lightweight construction. Each completed Porsche 924 contains 4661 spot welds and over 32 running feet of CO₂ welded seams.



Flow-Through Ventilation

The Porsche 924 uses a unique flow-through ventilating system. This fresh air is also used to fight corrosion. After passing through the passenger compartment, flow-through air enters outlets at the rear window—passes through the rear quarter panel—forward through the door panels and out of the car at the forward edge of the doors.

Numbers & Curves



PORSCHE 924 SPECIFICATIONS

(North American Version)

GENERAL

Wheelbase, in	94.5
Track, front/rear	55.9/54.0
Length	170.0
Width	66.3
Height	50.0
Fuel capacity, gal.	16.4

ENGINE

Type	sohc inline 4	
Bore x stroke, mm/in	86.5 x 84.4/3.41 x 3.32	
Displacement, cc/cu in	1984/121	
Compression ratio	8.0:1	
Bhp @ rpm, SAE net	95 @ 5500	
Torque @ rpm, lb/ft SAE net	109.2 @ 3000	
Fuel injection	CIS (Continuous Injection System)	

PERFORMANCE (factory figures)

Acceleration, 0-60 mph	11.8
Top speed, mph	118

DRIVE TRAIN

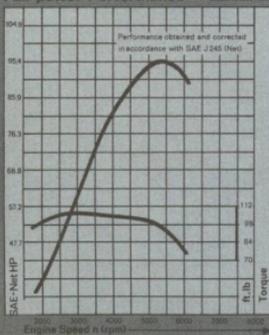
Transmission	4-spd manual unit with differential
Gear Ratios:	
4th	0.97
3rd	1.36
2nd	2.12
1st	3.60
Final drive ratio	3.44:1

CHASSIS & BODY

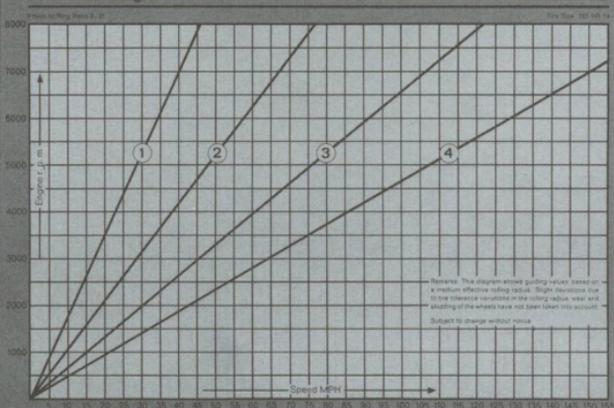
Body/frame	unit steel
Brake system	discs front, drums rear; power assisted
Wheels	steel 5½ J x 14 or optional alloy 6J x 14
Tires	radial, 165HR-14 or optional 185/70HR-14
Steering type	rack & pinion
Overall ratio	19.2:1
Turns, lock-to-lock	4.0
Front suspension:	independent coil/shock absorber struts, negative steering roll radius
Rear suspension:	Independent trailing—diagonal arm, one torsion bar each

The horsepower curve shows maximum output at 5500 rpm. Red line is activated at 8500 rpm. The torque curve is relatively flat throughout the entire speed range.

Full-power Performance



Transmission Diagram



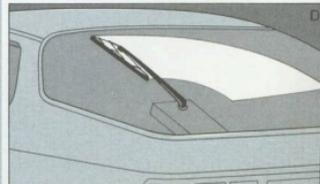
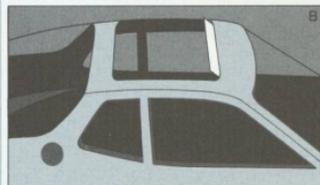
PORSCHE 924

Standard Equipment

- 2.0 liter four-cylinder liquid-cooled, overhead cam engine
- CIS fuel injection
- 95 horsepower SAE net
- Four-speed fully synchronized rear Transaxle
- Four-wheel independent suspension, McPherson struts front, torsion bars rear
- Welded unitized body
- Integral front spoiler
- Power assisted brakes, discs front, drums rear
- Dual diagonal brake circuits
- Negative steering roll radius
- Rack and pinion steering
- Lift-up hatchback
- Tinted glass all around
- Electric rear window defogger
- Carpeted rear luggage area with fold-down back
- Roomy storage pockets in both doors
- Full carpeting
- Inertia-reel seat belts
- Reclining bucket seats
- Protective front & rear bumper moldings
- Protective exterior side molding
- Center control console
- Leatherette-covered steering wheel
- Transistorized ignition
- Transistorized tachometer
- Trip mileage odometer
- Fuel reserve indicator
- Quartz clock
- Retractable headlights
- Electric windshield washer/wiper with intermittent wipe cycle

Options/Accessories

- Air conditioning
- AM/FM stereo radio
- Removable sunroof
- Automatic transmission
- Headlight washers
- Electric rear window wiper
- Light alloy wheels
- Stabilizer bars front and rear
- Leather covered steering wheel
- Trailer hitch
- Fog lamps
- Speed control
- Ski carrier



What critics say about the new Porsche 924

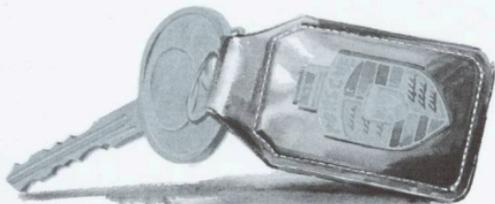
"The 924 very clearly proves the state of chassis art today. This car refuses to break loose at either end unless you so desire, it handles ess bends as if on rails and when I managed to find a single stream of water on the road around a dry corner it merely flicked sideways with a little opposite lock and returned to the path with no tail wag or drama whatsoever.

This is the sort of handling they once told us would require mid-engine mounting and all the rest. Obviously a machine which retains the same near-even weight distribution empty or loaded (with a bit of bias over the driven rear wheels) can do that job today without fuss."

*Jerry Sloniger
Road Test Magazine
February, 1976*

"The transaxle principle not only achieves the most desirable loading of the driven rear wheels, but also the weight distribution remains virtually unaltered (slight weight bias to the rear wheels) under different load conditions of the car. The 924 remains directionally stable and retains its neutral handling characteristics for all load conditions. Under extreme cornering, the change-over from the normal steered course to a drift condition is totally predictable and can be easily controlled."

*Porsche Panorama
February, 1976*



Meeting a continuing challenge.



1949
356 COUPE



1961
356B HARDTOP



1972
911S COUPE



1952
356 CONVERTIBLE



1964
356C HARDTOP



1973
911S TARGA



1953
356 CONVERTIBLE



1964
356C COUPE



1974
911 CARRERA



1954
356 SPEEDSTER



1964
911 COUPE



1975
911 CARRERA



1956
356A SPEEDSTER



1967
911 TARGA



1975
914 ROADSTER



1960
356B ROADSTER



1971
914 ROADSTER



...the Porsche 924



PORSCHE

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