

## Suspension History

Written by Joe Paluch

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Over the years Porsche changed the 944 suspension components a few times. These changes in suspension have a minor impact on performance on the track, but can play a large role in car maintenance and preparation.

The 87-88 924S uses combination of 944 parts that make this picture even more complicated.

The good thing is that all the suspension is interchangeable to various degrees so replacing damaged or worn out parts can often be done with junkyard parts if you know how they interact.

Any suspension will mount to any chassis with no need for cutting or welding.

One MUST be careful in swaps between late and early offset suspensions since you need to match the proper wheel to keep the stock track and the narrow fenders of the 924S does not allow for late suspension parts.

Lets start with First version of the 944 - Model years 83-85

### 83-85 944 - Basic 944 Model

#### Front:

- Control Arm Material: Steel - VW Part Number
- Ball Joint: Replaceable - VW Part Number
- Suspension Width: Early - Known as Early offset suspension
- Track Stock: 58.1"

#### Rear:

- Semi-trailing Arm Material: Steel - VW Part number
- Suspension Width: Early Including the factory standard spacer (The spacer used to allow use of off the shelf VW trailing arms.)
- Track Stock: 57.1"

#### Wheels:

- Stock Types: 15x7 Cookie Cutters (Cast Al), Optional 15x7 & 15x8 Fuchs (Forged Al)

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- 944-Spec Legal Wheels: 15x7 Cookie Cutters, 15x7 Phone Dials
- Offset Requirement for stock track: 23.3 mm "Early"; offset

### **85.5-86 944 - Replaced VW Control Arms with Porsche Design Parts in Aluminum**

#### **Front:**

- Control Arm Material: Cast Aluminum - Porsche Specific Part Number (A)
- Ball Joint: Integral to Control Arm not replaceable, Some aftermarket rebuild kits now available
- Suspension Width: Early - Known as Early offset suspension
- Track Stock: 58.1"

#### **Rear:**

- Semi-trailing Arm Material: Cast Aluminum - Porsche Specific Part Number (A)
- Suspension Width: Early No Factory Spacers needed
- Track Stock: 57.1"

#### **Wheels:**

- Stock Types: 15x7 Phone dials (Cast Al), Optional 15x7 & 15x8 Fuchs (Forged Al)
- 944-Spec Legal Wheels: 15x7 Cookie Cutters, 15x7 Phone Dials
- Offset Requirement for stock track: 23.3 mm "Early"; offset

### **87- 88 944- Made change to Porsche Arms to allow for ABS**

#### **Front:**

- Control Arm Material: Cast Aluminum - Porsche Specific Part Number (B)
- Ball Joint: Integral to Control Arm not replaceable, Some aftermarket rebuild kits now available

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- Suspension Width: Late, Suspension width Changed in all cars to accommodate optional ABS. ABS not common to 944 NA, but common in Turbo
- Track Stock: 58.1"

### Rear:

- Semi-trailing Arm Material: Cast Aluminum - Porsche Specific Part Number (B)
- Suspension Width: Late, Suspension width Changed in all cars to accommodate optional ABS. ABS not common to 944 NA, but common in Turbo
- Track Stock: 57.1"

### Wheels:

- Stock Types: 15x7 Phone dials (Cast Al), Optional 16x7 and 16x8 Sewer Lids (Forged Al), or 16" Phone Dials
- 944-Spec Legal Wheels: 15x7 Phone Dials
- Offset Requirement for stock track: 52.3 mm "Late" offset

## 87- 88 924S - Early Steel front and Early Aluminum Rear

The 924S uses the front suspension from the 83-85 944 and the rear suspension from the 85.5-86 944. Due to the narrow fenders late offset wheels are used. This reduces the track width by about 1" per side. 15x7" late offset wheels are an easy fit in the rear and tight in front with little clearance between stock diameter springs and the inside of the tire. Narrow 2.5" diameter springs create plenty of clearance to the tire. It is also possible to use a smaller spacer to create clearance while still staying in the stock profile of the fender.

### Front:

- Control Arm Material: Steel - VW Part Number
- Ball Joint: Replaceable VW Part Number
- Suspension Width: Early - Known as Early offset Suspension
- Track Stock: 55.8"

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### Rear:

- Semi-trailing Arm Material: Aluminum - Porsche Specific Part Number (A)
- Suspension Width: Early No Factory Spacers needed
- Track Stock: 54.8"

### Wheels:

- Stock Types: 15x6 Phone dials (Cast Al)
- 944-Spec Legal Wheels: 15x7 Phone Dials
- Offset Requirement for stock track: 52.3 mm "Late" offset

## Update/ Backdate options & issues

### Front suspensions:

Early Offset Cars (83-85, 85.5-86 944 and 924S cars) can Update/backdate to steel/Aluminum front control arms by replacing the arms and rear caster blocks. No changes to spindle, hubs, brakes or steering rack are required. The bushings are different for the Steel vs Aluminum. The cross member bolt is the same.

Late Offset Cars (87-88 944) can backdate to early offset parts and early offset cars can update to late offset parts. In these cases the spindles, hubs and steering tie-rods must be changed along with the control arms and caster blocks. Also the wheels need to be changed to ensure the right offset.

### Rear Suspensions

Early Offset Cars can update/backdate by swapping complete semi-trailing arm assemblies. These assemblies include rear hubs and brakes. Aluminum arm cars can bolt on steel arms, but steel arm cars need to change the spring plate to use aluminum arms. Any swap also requires a change to the 1/2 shafts as these are longer on Aluminum arm cars. Shocks are different as well, but I believe can be easily modified to function correctly.

Late offset cars may backdate to aluminum and early offset aluminum may update now changes to spring plate, 1/2 shafts, or shocks. Steel arm cars encounter the same issues as moving to aluminum early offset early suspension. A wheel change is required however for any early/late offset swaps.