

# PORSCHE PANORAMA

AUGUST 1988





# 914 Know-How

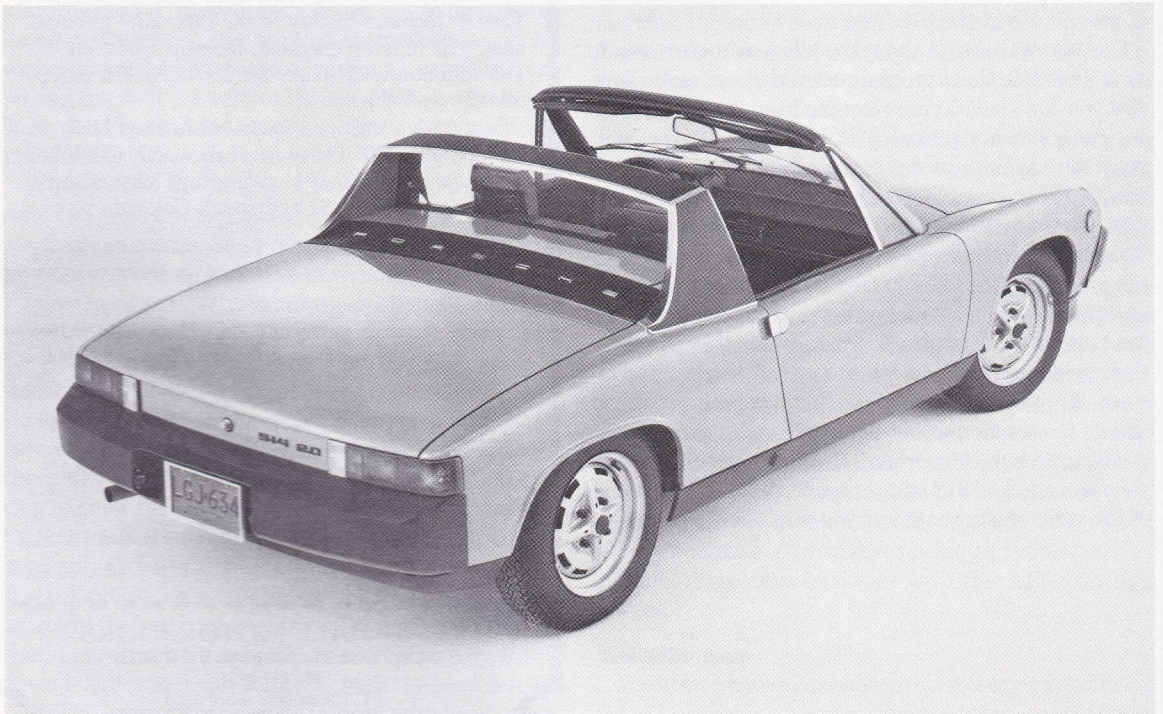
*A survey of tried and true ways to make Porsche's popular roadster more enjoyable*

By A. L. Caldwell  
Contributing Editor  
Reprinted from *Porsche Spiel*  
Pacific Northwest Region

The 914 could well turn out to be the last of the simple, lightweight and affordable Porsche roadsters. The dictionary defines a roadster as a light, open automobile that seats two and has a compartment for luggage. After studying the specs and reviews on the new 911 Speedster, one has to conclude that while it is undoubtedly an excellent sports car, it doesn't quite fulfill the concept of a light, simple, general purpose roadster package. A number of faithful fans still hope there will be a modern replacement for the 914, but it may never happen.

This is the 13th year since 914 production ended after the VW-Porsche joint effort contract for the project came to an end early in the winter of 1975-1976. A total of 115,596 914/4 roadsters were made over the seven model years, plus an additional 3380 914/6 models or derivatives. The 914 was popular in the United States where more than fifty percent of them ended up. The number of 914s seen on the road seems to diminish each year, but there are still quite a few out there and still quite a few being purchased by both first-time and previous Porsche owners looking for a unique and affordable sports car.

Even if the first-time 914 owner has done some research on the car, it is often difficult to figure out some of the original features and idiosyncrasies due to the length of time that the car has been out of production. For those of us who purchased 914s when new and participated in the total model evolution, a number of owner modifications and improvements were learned that may be of use to newer owners. Much of this owner experience data is incorporated in *Upfixin der Porsche*, the technical anthology series from PANORAMA, starting with Volume 3. Even the latest version of *Upfixin*,



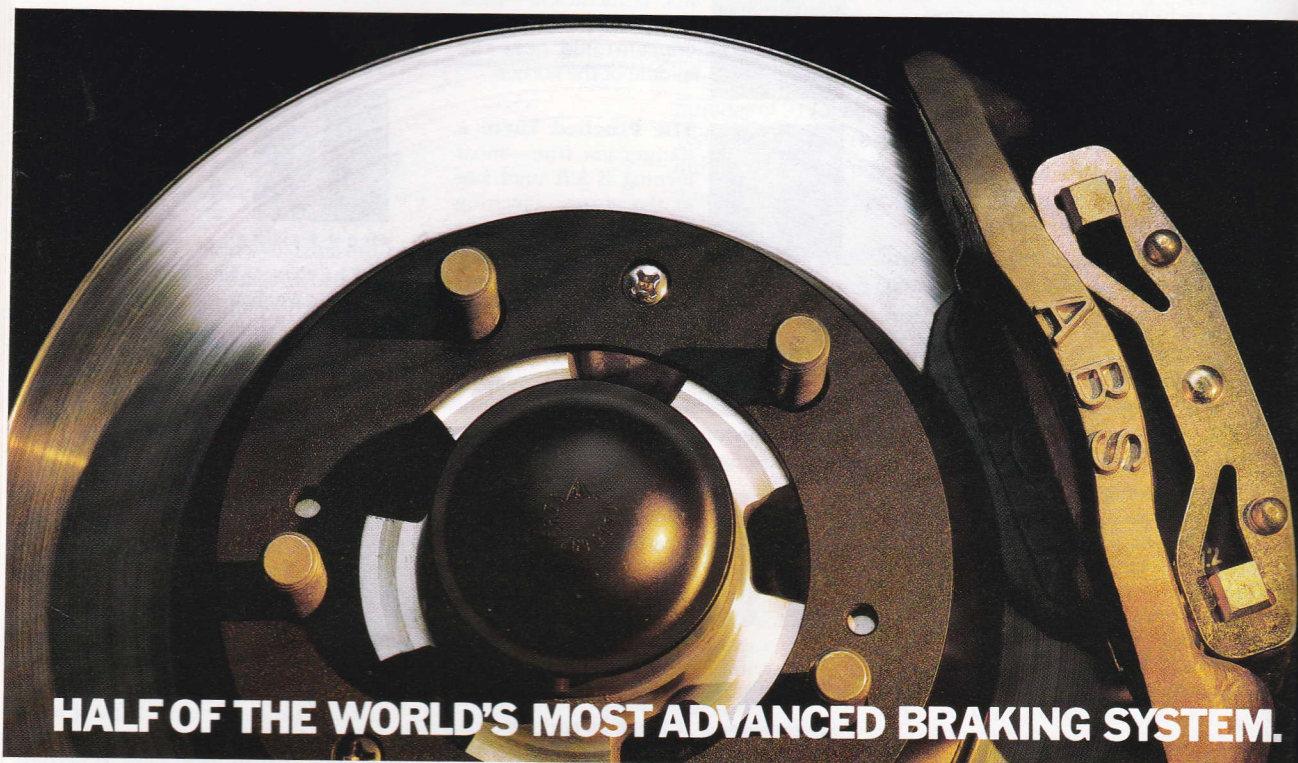


Volume 7, which covers 1984 through 1986, has a number of good 914 articles. The *Upfixin* series is available from the PCA Executive Office (P. O. Box 10402, Alexandria, Virginia 22310, 703/922-9300) in single volumes or as a set. Past issues of *VW & Porsche* magazine also offer a wealth of ideas on the various 914 project cars they have featured.

Restoration and upfixin of the 914 engine and drive train have been the subject of many treatises. The purpose of this article is to summarize some of the equipment and accessory modifications and updating for increased owner enjoyment that proved to be successful for early owners. Some of these may violate concours

market plastic version that is more flexible than the original fiberglass version and is still available. The rear valance prior to 1973 extended low enough to surround the exhaust pipe. In 1973, a shorter rear valance was used which, along with the underside body flaps just ahead of the engine compartment, helped increase the flow of engine cooling air and reduced engine oil temperatures.

The lightweight sheet metal panels, doors and lids are usually assumed by a new owner to be the source of any body noises that are experienced. Actually, most 914 body noises can be traced to an ill-fitted top, or metal contact somewhere in the rear engine compartment lid



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competition originality points, so the new owner must decide how important that will be to him and plan accordingly.

### Body

The 914 body, built by Karmann, is very light in weight and has all the same general design features and layout as the 356 and 900 series air-cooled-engine cars. Occasionally you will see missing front spoilers or a missing rear valance on the older cars. These should be replaced or updated. Many owners liked the more vertical front spoiler that came in fiberglass on the special edition models in 1974. There was an inexpensive after-

or deck-lid torsion bars. The doors and window glass are adjustable to allow correct fit with roof and body, and provide rattle-free operation. The famous rear deck-lid bracket failure can be avoided if you catch it soon enough by installing the equally famous lubricated shoulder bolts invented by Pacific Northwest member Syd Baker (see *Upfixin* Volume 5, page 176).

The 914s came with a left-hand external rear view mirror only, but the right-hand doors have the welded nut plates built in for adding a right-hand external mirror. All you have to do is carefully locate their position and drill them out. The stock 914 outside mirror can be used on either the left or right side.



There was a significant change in the 914 removable top beginning with chassis number 4732926222 (July 4, 1973). A new roof design was employed which had flattened rear side rails for a thicker roll-bar seal. In addition, new side weather seals were used (914.531.185/186) which had an extra lip for improved sealing at the window edge. The newer side weather seals (not the rear seals, however) can be retrofitted to the earlier tops and provide improved wet weather protection. Top noises can develop if the aluminum channel which holds the side weather seals works its way through a worn weather seal and contacts the metal in the roll bar. Tapering the edge of the aluminum chan-

without incurring serious bump-steer. Front end chassis settings on the 914 call for +20 minutes of toe-in (pressed,  $\pm 10$ ) and 0 degrees camber.

A wide variety of steel and alloy wheels were offered as original equipment on the 914 (for a complete summary see Allen Roof's article in *Upfixin*, Volume 6, page 48). The largest factory rim width used was 5.5 inches and the standard tire was 165/15. Most owners soon found that a 185/70x15 would fit just fine (although possibly were not legal in some events), and the more enterprising owners adapted even wider variants. If wider rims are your game, most experts will say six inches is about the maximum on a 15-inch wheel. *VW & Porsche*,



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nel can eliminate the contact (see *Upfixin*, Volume 6, page 58).

### Chassis

The 914 chassis is very similar to the 911 in front but has a somewhat unique trailing arm rear suspension. Some of the cars we see on the road exhibit rather odd nose-up angles. When they were new, this characteristic was due to the height settings that came with delivery in the United States. Today it is usually due to sagging rear coil springs that should be replaced. Most owners found that the car could be lowered in front by about an inch from the original factory height settings

however, showed in their April 1983 issue how they ended up with a seven-inch, specially made wheel and 205/60x15 tire without any fender modifications or rubbing.

### Brakes

Complaints about spongy 914 brakes were gradually solved by a combination of steel brake lines, use of the 914/6 19-mm master cylinder (the original 914/4 cylinder was 17 mm), and the latest trick of exchanging the stock rear brake line pressure limiter for the Garretson Enterprises Kelsey-Hayes kit. There is no reason for 914 brakes to be any less effective than other Porsches.



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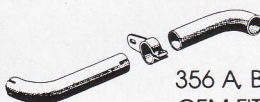
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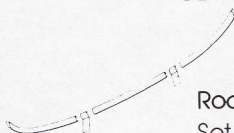
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### Interior

Owner attitudes on the interior seemed to be related to the 914's very low body (four inches lower than a 911) and the driver's height. Shorter drivers seemed to accommodate to the seats and general seating arrangement best but found the interior rear view mirror too high (good view of the roll bar). Because the mirror attachment is slightly off-center, this can be solved by rotating the mirror 180 degrees to provide a better field of view and the dimming lever will work just as well on the top of the mirror as on the bottom.

For those that wanted more elegant seats, both Scheel and Recaro built a 914 sport seat that could be adapted easily to the existing seat supports. The original seat rails can be removed from the factory seats and fastened to the aftermarket seats. The Scheel requires relocation on one of the attach screws, but otherwise works well.

### Electrical

Many of the electrical system features on the USA 914s had some peculiar characteristics and having a wiring diagram is handy. For example, the driving lights in the front bumper were wired so that they would only come on when the headlight low beams were on. There is a fairly simple modification you can make to the fuse



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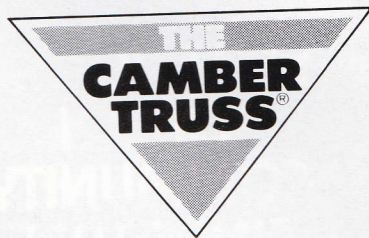
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panel and fog light switch wiring which will allow the driving lights to be operated independently of the headlights. The fog light switch operates a relay which is the middle black plug on the fuse panel. The fog switch, however, gets its power from the headlight switch when it is on and if the high beams are on, the fog light relay won't work at all. This is easily remedied by first rerouting the power wire to the fog light switch (a black wire with blue stripe) from the headlight switch to a hot lead on the input side of the fuse panel (No. 8 or 9 if you want it to work only when the ignition is on and No. 10, 11, or 12 if you want it to work all the time). Note that the input side of the fuse panel is toward the rear of the car and the forward edge of the panel is the output side. The input side is equipped with several spare terminals for accessories.

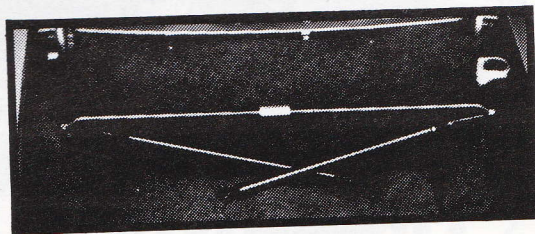
Once you have power to the fog light switch independent of the headlights, then the only remaining task is to make sure the fog lights will work with the high beams on. The fog light switch actuates the fog light relay which has its solenoid not connected to ground, but to the high beam hot lead on terminal No. 1 on the fuse panel. This means that every time the high beams are on, the fog light relay can't close. The solution is to connect the fog light relay solenoid directly to ground instead of the high beam hot lead, so that every time you

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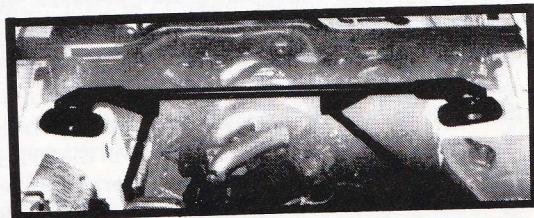


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pull on the fog light switch, the fog light relay closes, high beam or no.

Most 914 owners are also looking for a way to flash their lights without the headlights on by pulling straight back on the turn signal lever as you do in the 911. For a number of years there has been an aftermarket relay kit offered by H & H Specialties Co. (20 Reid Rd., Chelmsford, MA 01824, 617/256-9465) that could be added to the fuse panel to accomplish this. Although these units have not been seen in catalogs for some time, a recent phone call to H & H indicated that they still have some available. An alternative is the do-it-yourself wiring modification suggested by Chuck Stoddard in *Upfixin* Volume 3, page 109.

Perhaps one of the most popular 914 electrical system modifications of all was the conversion of the windshield washer system from spare-tire air-pressure operation to electric. The reasons for doing this included avoidance of getting your feet wet when the pneumatic washer valve in the steering column suddenly failed, as well as avoiding an accumulation of washer fluid in the spare tire. A number of 914s developed leaky one-way air valves in the pneumatic system and their spares picked up sizable quantities of windshield washer fluid. Trying to balance or just drive on a tire with a couple of quarts of internal liquid is an interesting experience.

Several articles detailed this conversion including an article in *Upfixin* Volume 5, page 80, which used an early VW switch kit, and the latest ones in *Upfixin* Volume 7, page 194, which use a later and probably more readily available VW Rabbit switch. All of these approaches end up with an electrically operated washer control on the wiper switch just like the original control.

The 914 intermittent wiper system which first appeared in the late 1973 model year production can be retrofitted to cars without it by using the stock relay and modifying the steering column housing to allow the wiper control arm to move downward into the delay switch. This is especially easy on the 1973 and later models in which the wiring was built in and all you have to do is snap out the small piece of plastic in the steering wheel housing that allows the wiper arm to move down to engage the switch.

#### Summary

The above modifications are just some of the things that can be done to personalize and upgrade a 914 if you are just starting out. All are do-it-yourself projects that have been used by other 914 owners and work well. Additional ideas and mechanical modifications abound in the *Upfixin der Porsche* series and past issues of *VW & Porsche* magazine. In particular, the 914 project car se-



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