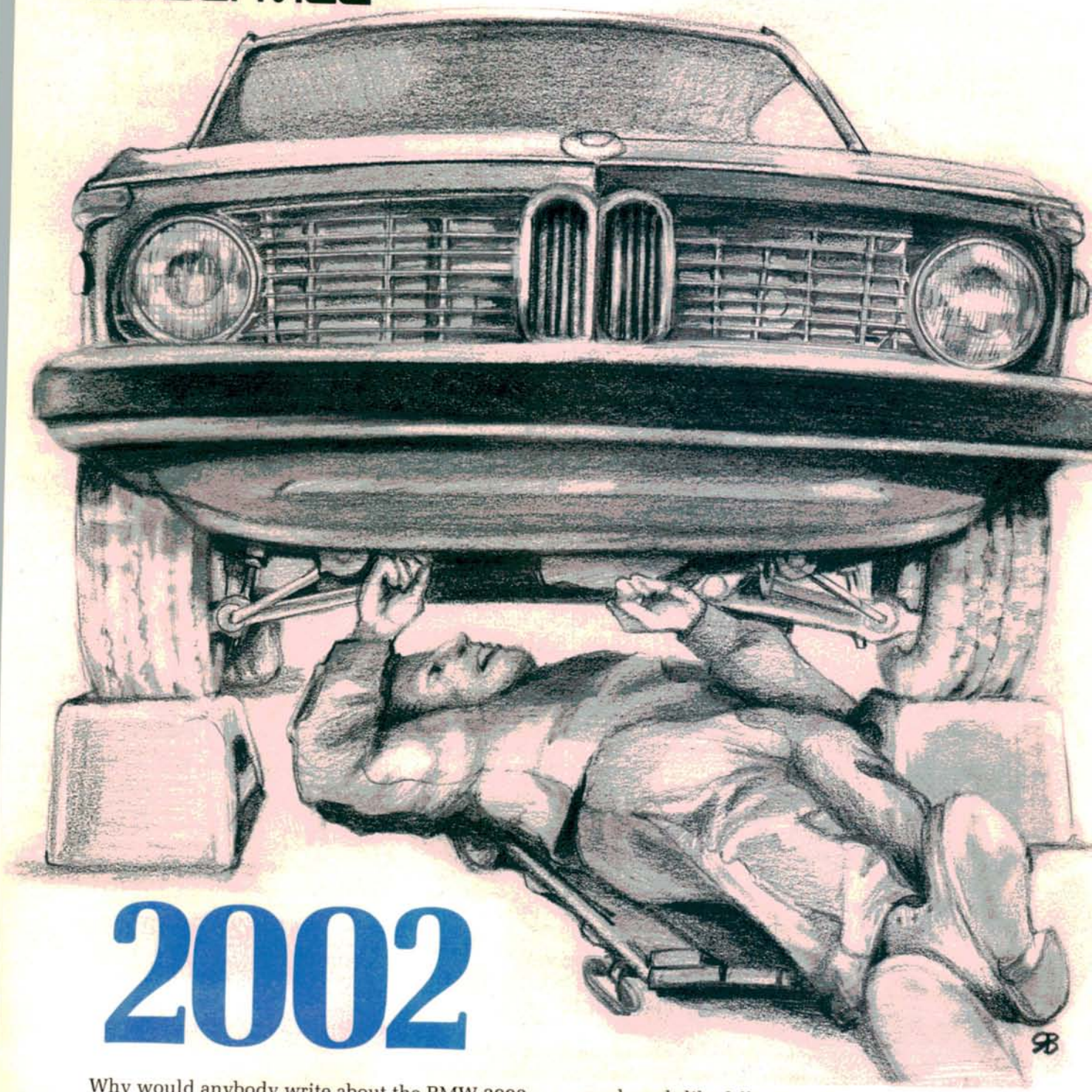


2002

Why would anybody write about the BMW 2002, you might ask? Why concentrate on a car that hasn't even been produced for 15 years?

Well, it's like this:

There are often two separate schools of thought out in the field about the age of the vehicles we should cover in *Import Service*. Some of you are very interested in current state-of-the-art technologies, especially as they relate to the three headed monster known as electrical/emission/driveability.

But we've also received many requests for articles about older cars, especially cars which have developed a cult-like following. There are a number of cars out there which fall into this category: Alfas, English sports cars, Mazda rotaries, old BMWs, and even old Volkswagen Beetles are just a few examples. (You guys in the Borgward Club are on your own.)

Die hard loyalty to the preservation of these sentimental favorites has resulted in an ongoing physical and financial committment by their owners. And in many cases, their willingness to sacrifice both their knuckles and their cash has been bewildering to folks whose minds drive along at 54 MPH in the right hand lane of pure rationality.

We've selected the 2002 since it qualifies for consideration on a number of fronts:

• It is the breeding stock from which the current 3-series was developed.

• It has been a favorite restoration and retro-fit car for many do-it-yourself owners and repair technicians alike.

• There is still a good supply of parts—both original factory parts as well as those supplied by aftermarket sources.

• Most importantly, there are people who believe that the 2002, like the B-52 bomber, will run as long as the money holds out.

It seems there are still a few profitable pockets of consumer resistance holding out against high tech.

Evolution

Introduced in 1968, the 2002 went through many changes until its final production year of 1976. Most subtle changes in the 2002 were aimed at improving the breed. Some were successful, and some, aimed at making the cars acceptable to the American market (and government), were seen as steps backward by the BMW faithful when later models put on a few unwanted pounds and lost a step or two in the quarter mile.

It seems that the ultimate appeal of the car, both then and now, had to do with its image as an affordable sports sedan. (A sports sedan is a car you can have fun with, but still justify to your wife when the car payment comes due each month.)

These justifications made in the name of domestic tranquility included the ability of the 2002 to haul the kids and bring home groceries. With that argument settled, you could feel free to paint numbers on the doors and race the 2002 against other guys who had pulled a similar con job on their better halves.

The affordability of the 2002 went beyond its modest purchase price. It was a pretty basic piece of equipment, and many 2002 owners sharpened their backyard auto repair skills by performing much of their own maintenance and repairs. Our lead art shows a scene which is still a common sight in many neighborhoods.

One big plus for the 2002 is that there are so many parts still available. Continued demand makes parts more plentiful for the 2002 than for many newer makes with a less loyal following.

Our thanks to John Tanis of Tanis Automotive in Rocky River, Ohio for sharing his hard earned expertise and for letting us tear into his little red 2002. While we can't cover every single twitch and change in the history of the 2002 (including the Kugelfischer mechanical fuel injection system used on Tii models), we'll try to point out a few highlights, common repair areas, and empasize a few of the customized retrofits which made the 2002 a very personal car.

—By Ralph Birnbaum

We gathered together a list of parts suppliers for the 2002. We've tried to list them by type, and called every one of them to be sure they have product available. Since many of the independent suppliers are BMW nuts themselves, they may also help you figure out the "mix and match" combinations available when retrofitting old 2002s.

General Parts

BMW of North America, Inc.
To be connected to your local authorized BMW dealer or to request literature call (800) 334-4BMW

Air Conditioning Units

International Conditioning Enterprises
Escondido, CA
(800) 845-0424

Interior parts

XKSS
Camarillo, CA
(800) 922-9577

Miscellaneous Parts

Bimmer Parts
Box 377 Pottstown, PA
(800) 274-2466

Sebring Automotive Enterprises
Richmond Hill, NY
(800) 248-1133

Greenfield Imported Car Parts
Greenfield, MA
(413) 774-2819

The Ultimate Source
Huntington, NY
(800) 537-8248

Rebuilt Engines and Transmissions

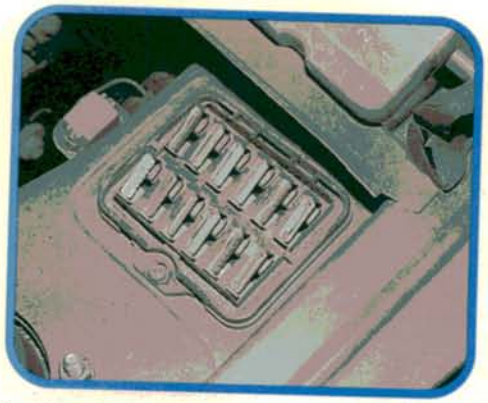
Metric Mechanic
Kansas City, MO
(816) 231-0604

Carburetor Conversions

JAM Engineering
Monterey, CA
(800) JAM-CORP

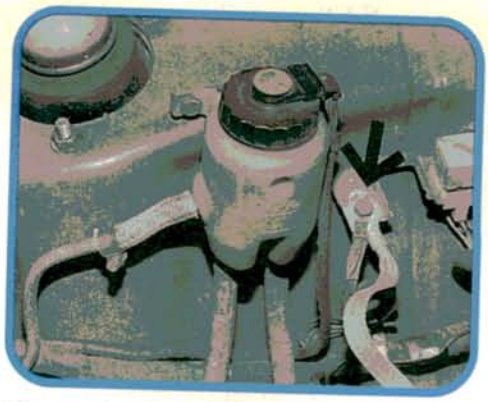
If you're interested in learning more about the 2002, you'll want to call and order the Illustrated BMW Buyers Guide from Motorbooks (800) 826-6600.

And if you're interested in BMW cars in general the BMW Car Club of America puts out a fine magazine for BMW enthusiasts called the *Roundel*. For info on club membership and the subscription to the *Roundel* which accompanies it, write to: Roundel, BMW CCA, Inc., 345 Harvard St., Cambridge, MA 02138, or call (617) 492-2500.



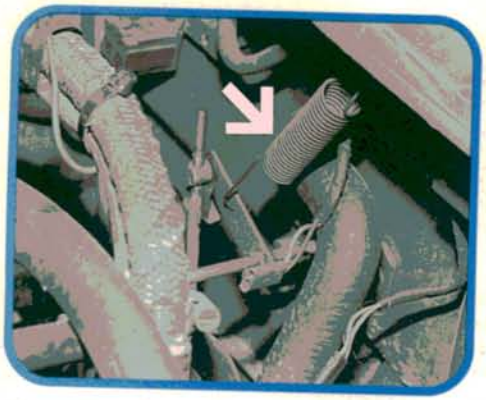
1

Let's start with electrical problems. This fuse box uses the old ceramic style fuses commonly used in European cars for years. The underhood location does little to ease problems caused by moisture and corrosion. Check the fuses for corrosion damage, and for opens caused by fatigued or cracked fuse metal.



2

The main chassis ground (arrow) next to the brake fluid reservoir can cause all sorts of electrical weirdness, and becomes a logical starting place when troubleshooting electrical problems. Fluctuating instrument cluster gauge readings are also a good indication of chassis ground problems.



3

One sure signal that you have a ground side problems is a warm (or even hot) carburetor linkage return spring. Electrical current will use the spring as a return to the battery when main grounds get bad. This can weaken or even destroy the return spring, depending on the severity of the problem.

4

Another ground problem. The alternator mounts on rubber grommets. As a result, the small ground wire (arrow) in our photo should always be installed to ensure proper charging. By the way, the grommets love to wear out and collapse, giving you a loose alternator and improper belt alignment.

5

Old point style distributors were no fun. In addition to normal ignition point replacements, these distributors would eat distributor shaft bushings. Then the wobbly shafts would cause dwell variations as you revved the engine. Lube the centrifugals with a few drops of oil in the wick in the shaft (arrow).

6

Your 2002 may or may not have a ballast resistor mounted near the ignition coil. The resistors were used to reduce key on voltage to the coil to make the ignition points last longer. The resistors can burn out over time. Some models eliminated the resistor and used a coil with a modified internal resistance.

7

Now for a few suspension tips. Before tackling a rear shock replacement on one of these, open the trunk and make sure there's something left to bolt them to. This photo shows what happens to the rear strut towers in the rust belt. Replacement towers are available to correct this rustitosis.

8

These factory ball joints are still in place at 120,000 miles. The originals are riveted to the control arm. Replacement requires that you drill out the old rivets and install the new ball joints with hardened nuts and bolts. Fairly straightforward stuff.

9

Some 2002 owners like to spray oil all over the undercarriage as a form of homemade rustproofing. The oil bath does little to prolong caster rod and control arm bushing life. Even without the oil bath, wear and tear make both bushings prime canditates for replacement on high milers.

10

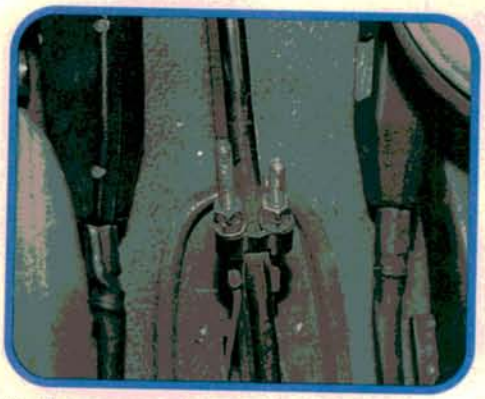
More under car items. The Guibo joint connects the front part of the split driveshaft to the transmission output shaft. The rubber joint dries out, cracks, and vibrates. New joints come with a metal strap around them. The strap compresses the rubber until the joint is bolted up. Use new lock nuts.

11

There's a cross shaft connecting the accelerator pedal to the external linkage pivot arm. This shaft can seize in the bushings, causing the linkage to stick and bind. Some get so rusted, that the linkage must be driven out of the old bushings before new bushings can be installed.

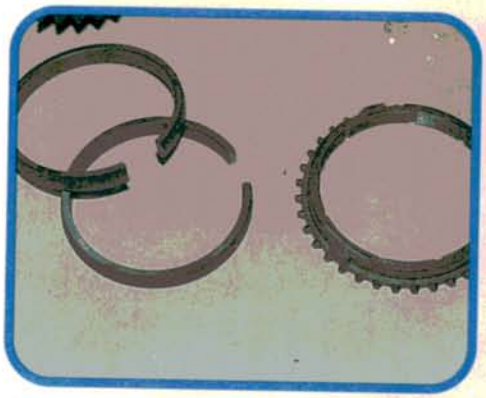
12

The rear brake shoe adjusters are pure manual adjust. Each shoe is adjusted by turning a hex head (arrow) attached to an eccentric pin passing through the brake shoes. As each pin moves through an arc, it moves the shoe toward the drum or away from it as needed. The eccentrics love to freeze from rust.



13

If the eccentric pins will turn a full 360 degrees without the shoe contacting the drums, there is no more adjustment to be had. Hand brake cable adjustments should be done after adjusting the rear shoes. Final adjustment of the hand brake cables is done inside the car at the hand brake lever.

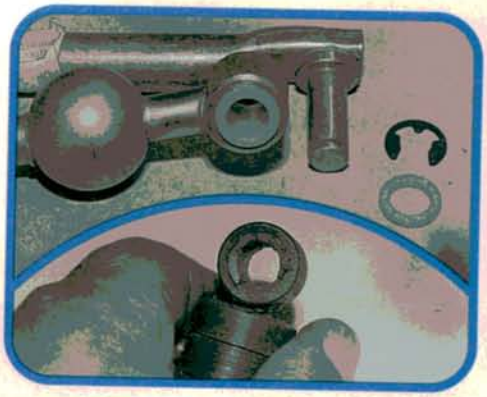


14

On to the transmission. Early style transmissions were infamous in two main areas: weak synchros and layshaft bearings. Early style synchros (split ring at left) were finally replaced with more conventional full contact synchros which lasted much longer than those used in the original design.

15

The other Achilles heel of the original four speed had to do with the ball bearing used at the rear of the layshaft. When the shaft started walking the trans started squalking. Metric Mechanic in Kansas City offers a redesigned trans with brass synchros and a tapered roller bearing on the layshaft.

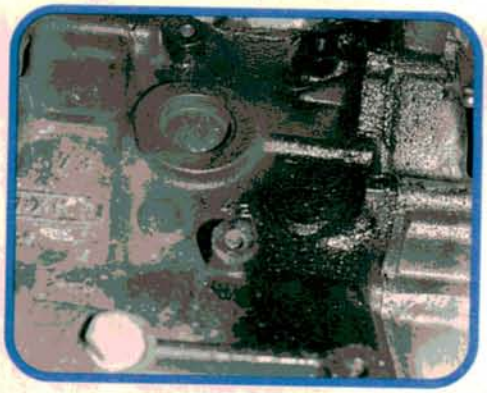


16

Old and new style shift rod linkages. As the bushings wore in the relay rod between the shifter and trans, shifting would become a hit and miss proposition. Nylon bushings wore quickly. Rod and bushing assemblies are available, although Metric Mechanic offers silicone/bronze replacement bushings.

17

The rocker arms and adjusters are pure BMW. Early style rockers had no pivot bushings. Later style arms have pivot bushings for longer life. The eccentric shims used to adjust valves will also wear out, but are replacable, including the studs and nuts which hold them in the arms.



18

Upper timing case covers are a common cause of oil leaks, and John's car is no exception. Fortunately, this repair can be done in the car. Throw in valve cover and head gasket leaks as common contributors to external oiling of engine and chassis parts alike.

19

The original 2002 had a Solex single barrel carburetor. A Solex two-barrel was introduced on late 1972 model 2002s, but the Solex was no Rolex. Most 2002 fanatics have at least one 40 PDSIT collecting dust on a shelf. It wasn't a friendly piece of equipment, and caused many driveability problems.

20

The failure of the Solex was an opportunity for Weber. In both downdraft and sidedraft configurations, Webers soon became the "bolt ons" of choice. The 32/36 Weber was a "stock" replacement in terms of performance, and provided a cure for the common cold driveability problems caused by the Solex.