

# One Approach to RESTORING AN AUSTIN-HEALEY

Installment  
One:

## Look Before You Leap



by Roger Moment  
with Gary Anderson

**M**ajor car restoration is a serious project, not to be undertaken by the faint of heart or impatient. Nevertheless, many enthusiasts decide to become actively involved themselves, and if they have the aptitude and endurance for the long haul this is a very good approach. At the least they learn much about how a car is constructed, its physical and mechanical characteristics, and what to be aware of in terms of potential on-road failure and approaches to fixing problems.

On the other hand, probably more enthusiasts undertake a restoration project with all the best of hopes and intentions, only to founder midway through the project, leaving another basket case to be cleaned out of another garage, and a big gap in another bank account. It has been our experience that the failures could have been anticipated even before the project was initiated, if the enthusiasm had been tempered with a little information and some careful planning.

Austin-Healeys pose few difficult or technical restoration problems. They were built in an era before computers, when assembly (and in some cases panel fabrication) was by hand, and most of the pieces are readily accessible. Furthermore, though the last big Healey rolled off the Abingdon line in 1967, and dealer stock is long gone, there are many suppliers of parts and

manufacturers of replacement items so that you can find almost everything you need.

So what's the difference between a successful, satisfying restoration and a disappointing failure? In this continuing series of articles, Gary and I will walk you through the restoration process from the beginning, when you first consider undertaking a restoration yourself, to the very end when you road-test your completed car.

At the very least, we hope the articles will help you understand what goes into a restoration so you can make an educated decision about undertaking it. Of course, we also hope that at least one or two of the Healey enthusiasts who read this series will undertake their own restoration and complete it successfully.

Over the 36 years that I have been working on Healeys (initially as a hobby,

Starting with this issue, we'll be presenting a continuing series of articles that is intended as a general guide to doing a full frame-up restoration on an Austin-Healey. At the end of this series, we plan to publish the entire series of articles in book form. Though the articles will be geared to the restorer, we expect to include many tips that will be useful to any Healey owner doing extensive repair work on his or her car.

later as an avocation, and finally, in semi-retirement, as a part-time vocation) with perhaps 20 completed cars to my credit, I have made my full share of mistakes and learned various tricks for doing tasks not only better but safer and more efficiently. It is this experience that I am drawing on in offering the following advice.

### Why Do It Yourself?

When you consider undertaking a restoration yourself, rather than "farming" it out to a restoration shop, or just searching for a finished Healey to buy, there are a number of factors you should take into account.

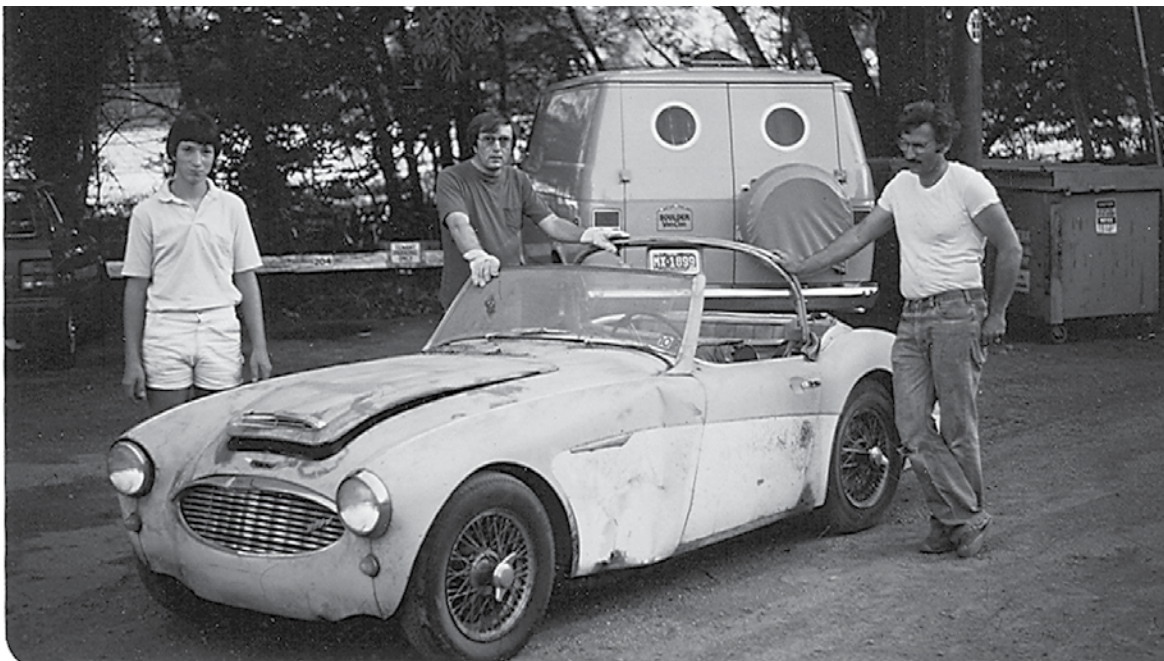
First, it takes a lot of time to do a complete "frame-up" restoration. A professional shop will require at least 1000 hours for disassembly, restoration of components, painting, and reassembly, if the shop has extensive experience doing complete Healey restorations, excellent skills and equipment, and the knowledge of how to do the details correctly. There are only a few shops I know of that I would put into this category. About 2000 hours will be required for someone who has a very good aptitude and skills for the various work required, and is trying to do a high quality job, but lacks first-hand experience on Healeys. Shop labor can run from \$50 per hour to \$90 per hour depending on where you live.

Second, farmed-out services requiring special equipment that an individual doesn't have or can't justify purchasing, and replacements for parts that can't be refurbished or reconditioned, can easily cost \$20,000 or more. Specialized service tasks include engine machining and balancing, TIG welding, major frame repair, painting, plating (chrome and zinc/cadmium), powder-coating, upholstering of the seats, and sewing of heavy materials such as carpet. And as just one example of parts costs, paint materials alone can run \$1500 to \$2000 for the self-etching primer, surfacer primer, sealer, color paint (including clear coat, if used) filler, sand paper, and polishing compounds. Add the cost of the car and you can do the arithmetic to calculate what a "check-book" restoration will actually cost.

Third, a meticulously correct restoration will take even more time. Rounding up original bits, and learning how something was done originally in order to get it exactly right, will drive time (and costs) way up. If you are a perfectionist, no matter what else you outsource, you will personally have to do a lot of leg work, since there is no way you can pay a shop enough to get everything exactly right. This will not only save you money, but also result in a higher degree of accuracy in the results. If you want something more than a professional restoration that's just reasonably accurate, you're going to be involved anyway, so you might as well think about how much you can do on your own.

On the other hand, an amateur with no previous restoration experience but with basic mechanical skills and aptitude, even someone who has never undertaken a project of this magnitude, if possessing (or possessed by!) the determination to learn and do it themselves, can do much of the work that a shop would otherwise do, including disassembly, parts cleaning and reconditioning, and reassembly. You will certainly spend more time on these tasks than an experienced restoration shop would take, but managing the project yourself and doing as much work as you can do on your own, spreading out the out-of-pocket expenses over a longer time as you proceed may be more manageable than paying a restoration shop in large advance-payment chunks.

In addition, there are many potential intangible benefits to doing your own restoration that take the project out of the realm of pure dollars and cents and return on investment. For example, for those with teen-age kids, a restoration project can be a great shared experience, teaching a variety of skills, developing planning



What leap to faith is required to believe that from the rusty metal and old parts of a forgotten Healey a pristine and functional show car can be created? These pictures were taken before a much younger Roger Moment, right, with his son Ben, left, and Healey enthusiast Don Voake undertook restoration of his 3000. The car went on to win Gold in Concours, cover thousands of enjoyable miles on the highway, and then be sold on to a collector who proudly owns and uses it to this day.



A restoration easily uses up all the space of a two-car garage. There are tools to be installed, parts to keep track of, and then, of course, there's the car to think of. The working area of Roger Moment's garage is pictured here, an extra-deep space that isn't generous, by any means, but by careful use of shelves and storage bins, he minimizes overflow out of "his" area of the garage.

and organizational abilities, and learning that "life" doesn't go all the perfectly and patience is a necessary virtue.

And, as they say, the pride of having done much of the work yourself is "priceless," and in the process you will come to know a Healey as few other owners really do. This alone will give you peace of mind when you encounter unexpected problems (and are there any other types?) with your car down the road.

Ask yourself one question: Are you interested in having the experience of a restoration, or do you simply want a restored car? If it's the latter, stop reading now and start saving your pennies to buy one that's completed or pay a shop to restore one for you. If it's the former, then read on and see if you're still convinced after you've finished. Just keep in mind that an uncompleted car is worth pennies on the invested dollar to a potential buyer, and you will pass the point of no return about one week into the project.

### But Wait...There's More?

Even if you have decided that you can undertake a restoration if you do much of the work yourself, what else should you consider? Before you make your decision, ask yourself (and significant others in your household) if you have enough space to do a proper restoration. Here, we'll assume that you plan to take the car apart at home and farm out component repair as necessary.

You'll need to be able to work around a car with its doors open on both sides. Adequate clearance allows you to move parts and tools around, and also provides a buffer so that you don't have stuff in the garage inadvertently fall against the car causing body and/or paint damage. I've seen and read of restorations that took place in small one-car garages, but suspect that much work was done actually outside this space, with the car being rolled in and out as needed. Personally, I think you need as a minimum a full two-car garage during the entire period of the project. This will provide room for the car, a buffer around it, access for large tools such as engine hoists, a place for larger tools such as air compressor, drill press, bead blasting box, jacks, storage shelves, and workbenches (yes, you'll likely want/need more than one). And don't forget that to hoist an engine in and out of a chassis you need room above for the beam of the hoist to clear.

Remember that we're estimating you'll spend over 2,000 hours, which means that most or all of the family's garage is going to be taken up with your project for two years or more. And for some part of that time, that space is going to be fairly messy and often dirty. Before you consider anything else, is that a feasible commitment, and is the entire household comfortable with it?

When you do disassemble the car there will be many large and heavy items that you will want to store out of the way. Wings (fenders), boot and bonnet (trunk and hood) lids, doors, seats, rear axle, engine, gearbox/drive train, wheels, windshield, and hood (top) assembly all come to mind. That means you'll also be intruding into other parts of the house during at least part of the project. All but the heaviest items could go into a basement. or a well-supported storage space above the work area, but it is advisable to have them out of the main work area unless they are being worked on.

Then you need to think about



Another view of Roger's garage, with his BN1, which he recently finished restoring for the third time. One interesting point to note here is that Roger's primary workbench isn't stuck against the wall, but is free-standing so he can easily work on all sides of it, and have space to hang awkward pieces off any of the edges. Like the cooking island in a modern kitchen, this is an excellent arrangement if you can manage the space for it. Tucked up on shelves, and ready to hand, he has all his small parts boxes. Larger parts and components such as body panels and drive train components were stored out of the way during the restoration when they weren't being worked on.

equipping the garage so you can work efficiently. One, and preferably two work benches will be needed. These can be constructed with a used, flat, 36-inch-wide solid core door with a solid support structure using 2x4 lumber. One central workbench about 36 inches high and preferably with working space around at least three sides will be essential. A work surface in a separate area will be very useful for many jobs so you can keep the dirty tasks separate from the ones requiring cleanliness when both are being done in parallel.

Sturdy, conveniently accessible shelving for storage, at least 12 inches deep, will be useful and will make a big difference in keeping your work area and inventory neat and organized. You can expect to require at least four sets of shelves, each four feet long and six feet high. Shelving needs to be good quality and heavy-duty, because auto components can be quite heavy. A shelf system that allows you to buy additional shelves is also important. "Gorilla"-style shelves from a home supply store is a good choice for this purpose.

Basic plumbing in the garage is important. There will be a *lot* of dirt created, especially during disassembly and body repair. Consider how you will clean up your work space – and you – at the end of each session. A deep sink in the garage will be highly desirable.

Lighting will be critical, since even daylight won't reach into deep nooks and crannies and much of your work will be done after nightfall in your available spare time. Fluorescent lights at six-foot intervals – installed in the ceiling, or purchased as

hanging units with extension cords for power – are excellent. These can be supplemented by portable lighting as needed.

Having a good set of electrical outlets will also make your work more efficient and safe. If you expect to do much compressed air work, a 220 volt circuit will help, though two or more 110 household circuits will be adequate for most work. In this same category, a telephone with a remote handset is equally critical, though a cell phone is probably an acceptable substitute. Ordering parts, asking questions, and perhaps even calling for help, are better done if you don't have to go into the house to make your phone calls.

### **Soooo?**

So you've considered carefully and you have the motivation, and desire to undertake a restoration. But don't underestimate the impact this project is going to have on family peace and harmony, which is equally critical to the project. Is your family comfortable with the idea that they will be parking cars, bikes, and lawn equipment somewhere else for two years, and that most of your own spare time is going to be spent in the garage?

If the answers are all positive, is it time to grab a wrench and start taking the fenders off? No, not quite yet. There's still the matter of planning the project, acquiring some additional workshop equipment, making sure you've got the basic tools, and developing an overview of the entire process from beginning to end. We'll take up those topics in our next installment. 