Our MGB

In 2006, a daughter and son-in-law (Anitra and Todd VanProoyen) bought us a 1976 MGB. They both knew that I had always liked MGBs and they had the opportunity to buy one for \$600 that needed some work. Perhaps that's an understatement. The body had damage, the interior was shot, it didn't run and, to put it kindly the DPO (technical automotive term: Dumb Previous Owner) had gotten very creative with the wiring on the car. This little article is a recap of 10 years work bringing the car back to life illustrated in pictures. I wish we had more pictures, but I never set out with the idea of documenting all that we did and was very surprised that I was able to sift through our pictures over the years and find the ones I did.

I guess the best place to start is by showing some pictures of the car's initial condition:

THE BODY

The body had two types of damage: rust and dings from accidents



(Note the side marker light's brittle and failed gasket - this was typical) The driver's side fender

and this rail are examples.



INTERIOR Here are a couple of pictures of the interior:



The DPO cut holes and created this unique bulkhead panel



It had a Holly side draft that the regulator and filter I added couldn't help



The wiring was over 90% non-functioning - Two wires ran from the ignition switch



Many wires were cut, twisted together or missing



Our first task: get the car to run!

I was disappointed that the car did not run. Todd had been told that the engine had been rebuilt, that it had a new exhaust system and was in fair shape.

We first focused on the carburetor. Having incorrect fuel pressure can prevent the carburetor from working and there was also the possibility that there was junk in the tank affecting the carburetor. We put new fuel in, added a fuel filter and a pressure regulator to no avail.



I checked that we were getting proper spark, had compression and that yes, the fuel pressure from the pump was correct. It would crank, try to start and badly shake for a second or two, but never run. I checked the spark plug wires to see what firing order they were set up for. I gave up for a couple of months.

Then it hit me. MGB's distributors (unlike MOST American distributors) run in a counter clockwise direction. Had I checked to see which way the firing order was set up? I didn't remember. But when I checked, I found that the firing order was correct for clockwise rotation and NOT for counterclockwise rotation. Could it be that simple?

I set up the firing order as it should have been and to my surprise, the car started running!

It still wouldn't run well and Pam had the Holly rebuilt for my birthday



That helped, but we realized it needed replacing - it was too worn out My Christmas present was a Weber downdraft carburetor I took this picture to help identify proper plumbing of the carburetor:



There were further problems to resolve, but the car would now keep running on it's own.

Before going on to attempt to address some of the problems with the electrical system, it was time to take care of two other problems. The distributor was not in good shape and the DPO had removed the air pump and rail without capping the holes.

Another birthday, father's day or Christmas (It's long enough ago that I don't remember) Pam bought a Petronix distributor. I added that on a started trying to take care of some of the other problems. Here is a picture of the new distributor and brass bolts with which we plugged the holes (I think they were 1/4 28s).



You may notice the wire leading from the engine temperature sensor just above the alternator. What was there when Todd bought the car was a bolt about 8" long protruding from the hole. The DPO had removed the sensor. I don't know if he just didn't care at what temperature the car was running or if he just didn't feel like tracking down a supplier for the part, but that was just one of the items not being tracked by any gauge in the dash. The oil pressure gauge (it's non-electrical) was the only gauge that worked.

THE ELECTRICAL SYSTEM

The electrical system was a major undertaking. Why didn't the turn signals, the lights, the gauges, etc. work? I knew that a major reason was that there was only one connector intact from the ignition switch to the wiring harness. There should have been two female connectors and two male. There was only one male. I found a source in Great Britain that sold the correct connectors. I took pictures of the connectors from the website, researched what should have been there and built the ignition switch connectors. Here is one extant picture of a diagram of one of the connectors I created:





The connector without any black tape is the original connector I ordered the other half of it and both halves of the one nearest the camera I don't want to bore anyone so I will only show you a couple more pictures of some of the condition of the wiring and how we were able to reconstruct the electrical systems and leave the rest of that task to your imagination. The box shows a connector dangling from a burned wire.



There were wires cut for no discernible reason - some patched back on



Note the red circled wire



This one was cut and then re-attached

There were sometimes two wires leading to a single post and none of them connected to anything. It would take many months to go through all of the wiring and determine why the fuel gauge didn't work or the tail lights or the flashers and on and on. I obtained a full set of schematics for the car, highlighted the component I need to bring back to life and traced all wires leading to or from it.

 Oil pressure gauge
Panel lamp switch
Line fuse for radio
Radio
Cigar lighter illumination bulb
Cigar lighter
Lift rear flasher lamp
Lift rear flasher lamp
Lift rear side marker lamp Cable co Brown Blue Red Purple G Green LG Light W Whit V Yelk Rla



It was time to tackle the body These are a few of the pictures we took:





The painting had to wait until we were able to get a deal that was inexpensive enough that we could afford it.



(I don't have a picture <u>before</u> we remounted the bumpers and the other body parts, put on the new tail-lights, put the refurbished dash back in and all new body gaskets including the windshield gasket)

After the car was painted, the next step was replacing the cracked, dry or missing body gaskets.

The windshield to body gasket was the one I dreaded as I had noted on one MGB site that it had taken 6 or 8 guys about 12 hours to do the job.

I spent a long time studying the problem before I tackled it and wrote up an article explaining how it could be done in 2 - 4 hours by one person.

Starting the next page is a copy of that article:

Windshield Bottom Gasket Removal and Replacement on 72-76 MGB (Doing this by yourself in three to four hours or less)

Removal

1. Undo the two center bolts on the top of the dash

2. Remove the brake alert light & glove box (for bolt access purposes) **Note: I ran this article by someone on MG Experience who I admire, trust and is much more able than I. He advised me to note that with those dashes where the top bolts are not accessible through the brake alert light and glove box, that these bolts can be removed with a ratcheting wrench. I am abiding by your wish to not give you any credit, but you know who you are and I have always appreciated your knowledge and experience. Thank you!

Drill out the pop rivets holding the dog-leg covers and remove the one screw at the top (that holds the chrome cap over the door seal)
Demons the formaria defield has helds (4 - 3) (X 11/2) and mindefield held helds (4 - 3) (X 11/2).

4. Remove the four windshield leg bolts $(4 - \frac{3}{8} \times 1^{\frac{1}{4}})$ and windshield

(Access the two top bolts through the glove box and brake alert areas)

5. Remove the old windshield gasket and dog leg pads

Gasket Replacement

It has often been posted that the factory must have had some way to easily install the bottom windshield gasket. This is true. If you look at the cutaway of a regular house window sash, you will see the identical groove into which the bottom MGB windshield gasket must be installed. Having worked as a glazier for 15 years in two of my father-in-law's factories and in the field, I am very familiar with this type of installation. It is the same groove used for weatherstripping on windows.



The truth of the matter is that this grove does not have anything to do with sealing a window or a windshield to the body of a car. It is there only to hold the gasket or weatherstripping <u>in place</u>. The gasket, itself, is what seals the windshield to the car body. Whoever is currently producing the seal did not understand this and has over-engineered this part of the windshield gasket. This part of the gasket should be thin enough to easily slide into the groove in the bottom of the windshield frame. In the factory, I can guarantee that they simply pulled the seal into place with no effort at all as it simply slid down the track. (And was quite likely pre-cut to length!)

So what to do about the problem? In the window business, I was often sent out to repair windows that had been damaged by builders in the course of their installation. One of the things that was occasionally damaged was the weather stripping. However, once the window was installed, you could NOT disassemble it to gain access to the end of the weatherstripping. In effect, you had the same problem that exists with an MGB windshield gasket if you do not want to disassemble the windshield and which also exists even if you do, because the poor engineering of the gasket does not allow you to easily pull it in place.

The solution in the field (which works for the MGB windshield) is to hold the interior edge of this part of the gasket in the installation track (similar to the track of the window pictured above) and to use a leather worker's bent-tipped awl or (similar tool) to work the other edge of this part of the gasket into the track. Work from the center to each end of the windshield.



Working from the front of the windshield

Doing this eliminates the stretching effect and can be done by one individual. Though still time consuming, this method should only take 30 minutes to an hour by one individual. (On this particular car, it took me 45 minutes to install the gasket without any assistance.)

Be sure to keep the seal lubricated with window cleaner during this process to facilitate installation and prevent gasket damage.

At some point, I lost my original tool and I purchased a hook and pick set from Lowe's for \$4.98 which worked just as well. Note the tool at the bottom - this will be the tool that you will want to use.



**** Just a note:** The gasket on this MG had been needing replacing for some time. As we were installing a new dashboard, I chose this opportunity to not only install a new windshield body gasket, but to fix a leaking windshield washer system. Having the dashboard out of the way made it much easier to do the re-installation of the windshield. Use your opportunities wisely.

Re-installation of the Windshield frame

(I had no gasket shrinkage, but many advise letting it sit overnight) 1. Trim the windshield gasket to snugly fit the entire length of the track. Because of the outward curve of the bottom of the windshield, if you trim the gasket with a straight cut, you will have a slight overhang of the dog leg pads. This is correct and desirable.

2. Slip the dog-leg pads over the dog legs (you will see that part of them fits under the main part of the gasket and the outward edge of the gasket fits under the dog leg fronts)

 Insert two thin ropes from center to end into the gasket front (to pull out the curled-up part of the front gasket later on during installation)
Insert the center dash bolts in the windshield before beginning

installation of the windshield

5. Insert the dog legs into the body.

6. Tighten the center dash bolts until the gasket is fitting snugly against the body of the car

7. Wet the area of the body in front of the gasket with window cleaner and pull the cords from the front of the gasket to flare it out onto the body. Stop and re-tighten the center dash bolts as you go. 8. Pry downward with a small pry bar or nail remover bar inside the dog leg area from which you removed the dog leg covers.





Install the two top bolts on each dog leg through the glove box area and the brake alert light area. Do not fully tighten these bolts at this time. (Note: I have seen postings calling for grinding the ends of these bolts to enable easier installation. This can damage the bolts and the threads in the dog legs. Instead of doing this, if you wish to use a tapered bolt (which I did), purchase $4 - \frac{3}{8} \times 1\frac{1}{4}$ " tapered bolts from your local wrecking yard. This size tapered bolt was used on the hoods of GMC pick-ups in the 70's. Mine came from a '79 GMC pick-up. They were only 1" long so I used only the bolt's built-in washer. Be sure to check that you have the correct bolts by matching them with the original bolts and carefully testing their fit in the dog legs. Just because they are $\frac{3}{8}$ " bolts does not necessarily mean they have the correct pitch/thread count)

9. Finish tightening the center dash bolts

10. Pull downward on the windshield frame while reaching under the dash and installing the front leg bolts (This part is difficult and, although I was doing this by myself to prove it can be done, a second person helps)

- 11. Tighten the four dog leg bolts
- 12. Re-install the dog leg covers with pop rivets. (and the top screw)
- 13. Re-install the brake warning light and glove box.

The entire process (including windshield removal) takes approximately three hours with the dash in place working through the brake alert switch and glove box. And although allowing the frame to sit overnight may not be necessary, it certainly gives you a good break in-between the two halves of the job! At the <u>outside</u>, I cannot see this taking anyone more than four hours and a great deal less with assistance. With the dash removed, the windshield took only 20 minutes to install.





The next area we tackled was refurbishing the cab area



We had saved a number of parts in baggies. This made it much easier to go back later and re-install things. Three things we purchased over the years were a battery box, a battery cover plate (one of the things that was missing on the car) and a battery cut-off switch.

We replaced the original dash and the DPO's modified console



We later changed the routing of the rear speaker wires



The speaker wires were run along the base of the tunnel and then through the side bulkhead above the rail

We then fished the wires up through the bulkhead and through the fender into the trunk (boot)



It was now time to install the carpet that our son-in-law, Todd and daughter, Anitra bought us.



We first installed heat insulation



We were now ready to install the carpets And the new door panels The carpet directions don't tell you everything you need to know. For one, how do you determine where to attach snaps and make holes for the seat bolts?

Our solution was to paint the snaps with white out and to run 1/4 28 round-top screw in the seat mounts and paint the tops of them.



We pressed our carpet pieces (which we had pre-fit) on top to mark them



The finished installation



Our new center console is correctly wired; the courtesy light and everything else works as it should. The radio has also been installed. It was time to install the back bulkhead panel and side panels

I fashioned the panels out of thin plywood; often guessing what missing pieces of the original panels must have looked like.



Rough drawings for estimating vinyl needed



The vinyl we found was wide enough that all we needed was 1 yard

We cut out the panels, backed them with foam and attached the vinyl with contact cement and staples



By making plenty of relief cuts, we had no difficulty in fitting the vinyl to the panels



We made the back bulkhead panel out of thicker plywood. It covers the holes that were cut in the back bulkhead for speakers.



We did two other things before installing the seats We installed the door panels And installed new seat belts



Seat belt installation



The '76 has the attachment point on the rail behind the seats



On the tunnel behind the seats



And on the wheel well by the back bulkhead





We had no money for repairs. The car was purchased by a daughter and son-in-law as were the carpets. All we had was determination mixed in with a lot of research and work. Taking it from the mess it was in to a point where we could finally call it complete has taken 10 years.

