

# BRITISH V8 NEWSLETTER

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**P.O. Box 6430, Maryville, TN 37802-6430**

**VOLUME XI, NUMBER 3**

**SEPTEMBER - DECEMBER, 2003**



## **FEATURED STORIES:**

- **CHRISTOPHER TRACE'S TR6/FORD 302**
- **TONY THIEL'S MGB/FORD 289**
- **BOB EDGEWORTH'S MGB/ROVER V8**
- **DON ZIEGLER'S MGB/GM 3800 V6**
- **289ci STROKER MOTOR**
- **JUICED STROKER MOTOR**
- **AND MORE**

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#### **WEB SITES OF INTEREST**

[www.fierosound.com/34engine/3400details.htm](http://www.fierosound.com/34engine/3400details.htm).  
[www.formatc.org/mgb/v6/](http://www.formatc.org/mgb/v6/)  
[www.v6mgb.com/](http://www.v6mgb.com/)  
Web sites about V6 engines.

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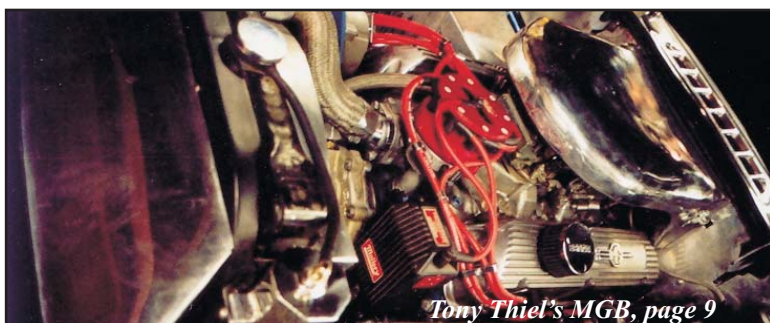
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## FROM THE EDITOR

It seems to be quite fashionable amongst old timers like myself to put down the younger generation, saying the kids today aren't like we were when we were young. As a matter of fact, kids today are exactly like we were when we were their age. They do, however, live in a dramatically different world than we did, which means that their lifestyle is dramatically different than ours was. If we have a problem with that, then we have no one to blame but ourselves, because today's youth live in a world created by us, as they haven't yet had a chance to create their own world.

In very few places is this lifestyle difference more apparent than in the automobiles today's kids drive. We like to put down the "rice boys" and the "rice burners" they drive, but think about it for a minute - what would we be driving if we were young today? When I was sixteen, I bought a rust free 1931 Ford coupe, in good enough condition for a daily driver, for only \$35.00 (about a weeks pay at the time). I could get a V8 engine from the junkyard for peanuts (flat-head Ford, of course), and nobody was telling me what I could and couldn't do to it - no EPA and no "safety" inspections. Today's kids don't have that option. They can't modify any performance aspect of their car unless the parts are EPA certified. For the most part, that only leaves graphics, sound systems, and neon lights as a means of personalizing their rides. Sorta like the fake duals and lowering blocks many of us put on our cars in our youth because we couldn't afford better.

So what does all this have to do with the Newsletter? A lot, actually. One big difference between the kids of today and us in our youth is money - we didn't have any, they do. Because they have the money to spend, the market caters to them (according to the Special Equipment Manufacturers Association, SEMA, they spent \$2.3 billion last year alone - that's billion with a "B"). Which means that there are a lot of go-fast goodies being developed for their cars. Even though most of the cars they drive are FWD, many of the engines in them are also used in RWD cars as well, or adaptors are available to convert them to RWD. For example, the Honda VTEC engine is used in a RWD form in the Honda 2000, and it spins in the correct direction as well.

Although the title of this publication is British V8, we will not limit coverage to only V8 engine swaps. In the next issue of the newsletter, you will find a fairly thorough discussion of the various V6 engine options available (I had planned to have that article in this issue, but my old nemesis "lack-of-time" reared its ugly head), and in a future edition we will cover some of the little 4-cylinders engines, Japanese or otherwise, that might be suitable as well. For many, the potential ease of installation of a 4-cylinder engine might be a real draw, especially when 200 or more HP are available. The idea of a modern, high-tech, reliable 4-cylinder engine, requiring little if any irreversible modifications to the car, has a definite appeal to many. For some mouth-watering information on the obscene amounts of power available from these tiny engines, see the *British V8 Articles* column on page 3. Not to worry, though, our primary interest will continue to be V8 conversions

Now for some potentially bad news: Unless someone steps forth to help out with the publication of this newsletter, and to help maintain the British V8 website, this will be the penultimate (next-to-last) issue of the newsletter, as the next issue will be the last under my publishing/editorial services. It is just simply taking up too much of my time to allow me to continue. I have

allowed myself to take on so many projects in the service of the British car hobby that I have precious little time left for my own projects. I've been in denial for several years, but I'm having to come to grips with the fact that my energy level is a lot less than it used to be. I like to joke that it takes me all night to do what I used to do all night, but there's a lot of truth to that - everything takes a lot longer to do now than it did when I was a lad. When I retired a few years ago, I had planned on living a somewhat leisurely life, but as each year goes by, I find myself more and more involved, with less and less leisure. Now that I am approaching actual retirement age, I think a real retirement might be in order, so I'm trying to lesson my obligations a bit.

Any one interested in taking over the newsletter and web site? It's a lot of work, but it is also very rewarding. I'll be more than happy to work with you to get you started, and I'll supply all the software you need, along with the newsletter templates I've developed. Kurt Schley has promised - and delivered - at least one article per issue, and I will try to do the same, making it a little bit easier to fill 16 pages per issue.

The website is paid up through the end of 2004, as is the domain name "BritishV8.org" I have all the website files on a CD, as well as all the templates you'll need to keep it updated.

As much time and energy as Kurt and I have put into the Newsletter, and as well received as it seems to be, I would sure hate to see it die. Someone please step up and take it over. It doesn't have to be done by only one individual, two or three might split the work between the Newsletter, the "How to Stuff a Small Block V8 into a Small British Sports Car" site, and the "British V8 Newsletter" site.

Please - Someone step forward and keep the Newsletter alive!

*safety faster!*

*Dm*

## CANADIAN CORNER

By Martyn Harvey

Waterloo, Ontario

Canadian MGBV8 Register

[www.mgbexperience.com/ca-mgbv8](http://www.mgbexperience.com/ca-mgbv8)

[harv8@sympatico.ca](mailto:harv8@sympatico.ca)

## **Cars, Flea markets and Thrift Stores: Hobby or Obsession?**

During the last decade my interest in the MG marque has almost grown into an obsession. Well, if not an obsession, then certainly an addiction. Driving 'em, fixing 'em, modifying 'em and collecting anything associated with them. The possibilities are endless. OK, so I confess to my addiction! But it is an enjoyable addiction and not too harmful to self or others. I prefer to call it a hobby and I suspect it will continue for at least another decade.

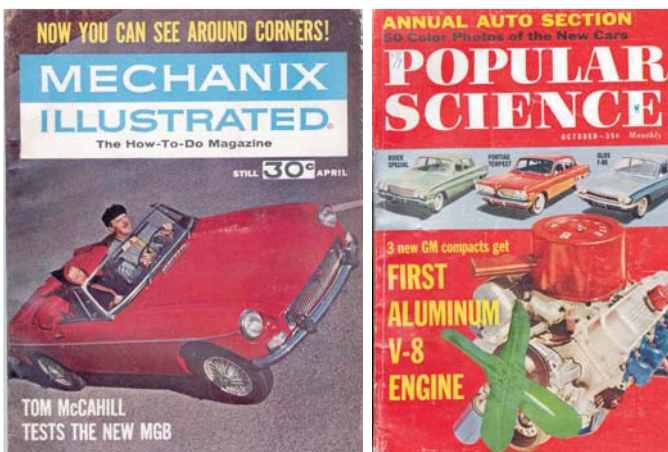
My hobby encompasses a wide range of MG activities as previously mentioned. Usually my hands show the telltale signs of messing with MGs, namely dark oil stains and the odd dirty cut. This kind of activity is necessary to ensure the main purpose of MG ownership; driving the cars on back-country roads. There is, however, an alluring activity that can occur quite innocently during weekends and holidays: shopping the flea markets, thrift stores and antique marts. The number of treasures that can be found is surprising and scoring a unique piece of MG nostalgia is exciting and highly rewarding to a collector like me.

In the past few years I have become very involved in building V8 powered MGBs. The engine of choice is the GM aluminium 215

V8 that was introduced to the US market in the Buick-Oldsmobile-Pontiac (BOP) compacts of the early sixties and subsequently fitted into different British Leyland products through the decades until today. So my collections include both MGB memorabilia and BOP 215 / Rover V8 memorabilia.

A lot of stuff can be found on the world's largest flea market, Ebay. Although I have "won" numerous pieces on Ebay (and enjoyed the process), nothing replaces the thrill of finding something "in person." For example, last month I was poking around a local thrift store when I spotted a box of old magazines. When I realized these magazines were Popular Science and Mechanix Illustrated from the 50's and 60's, I hoped I would find something valuable. As I pulled through the box I discovered two wonderful treasures: an October '60 edition of Popular Science that featured the introduction of the then new BOP engines and cars, and an April '63 edition of Mechanix Illustrated that featured a road test of the then new MGB Roadster. I thought it was ironic that these two antique magazines introduced the two machines that I enjoy mating together today. In fact, over forty years after the publication of these magazines, there are many people all over the world mating the BOP engine with the MGB!

Needless to say, I was thrilled with my "valuable find"



that cost me a total of twenty cents. The most enjoyable part of this event for me was the analysis of how this could happen. Forty years after their publication, these magazines were discovered together by an MGB V8 addict in a thrift store.

Isn't life interesting!!

WZ

## **BRITISH V8 ARTICLES**

### **Articles of interest from recent publications**

For those of us who might prefer the simplicity of a 4-banger installation, here are a few article that should be of great interest:

**Hot Compact & Imports** - September, 2003. How does 1200HP from a 2.2L (de-stroked and bored for 2.0L) Chevrolet Ecotec engine sound? Set-up for drag racing in a rear wheel drive configuration, it would not be suitable for a street driven car, but if they can get 1200HP out of it, a mere 300HP should be a piece of cake, and should still be streetable.

Somewhat more reasonable, this issue also featured a 725HP Honda VTEC engine. Although the featured car was a FWD, the Honda VTEC comes in a RWD configuration in the Honda S200 (and, it spins in the correct direction as well).

**Modified Magazine** - September, 2003: Another Honda VTEC, in a Honda S2000, this time with a mere 370HP. Or, how about a Maxda Rotary? Two RX3s are featured, one with 720HP and the other with 622! I have seen MGBs with rotary engines, and they seem to fit quite well.

Most of us are going to stick with V8s or V6s, but if you think a 4-cylinder (or a rotary) engine might work better for you, you really should be checking out the various "rice burner" magazines out there. As I mentioned in my editorial, today's kids have the money to push the market, and there is a vast network of suppliers pushing "go-fast" goodies for their cars, as well as what we might consider "tacky" accessories. One drawback to reading these magazines - they tend to liberally sprinkle the pages with pictures of scantily clad girls. If you disprove of this sort of thing, they might be distracting. On the other hand, if you approve, they may be even more distracting!

**Hot Rod** - October, 2003. If your preference runs to V8s, then you should pick up a copy of this magazine. No less than 18 modern V8s are described, from Japan and Europe as well as America. And if this isn't enough, they also describe eight engines with more than eight cylinders, including a V-12 from a Maybach, producing 664 lb-ft of torque! Unfortunately, the only way to get one of these is to plunk down nearly \$300,000 for a Maybach, remove the engine, and discard the body.

## **BOOK SHELF:**

### ***How To Improve Triumph TR5, 250, & 6***

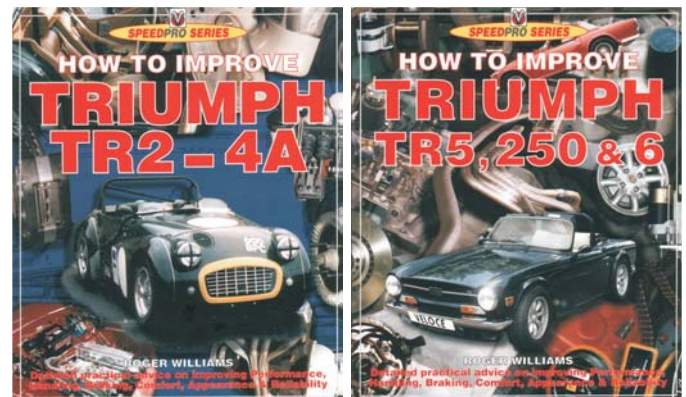
ISBN 1-903706-68-8

### ***How To Improve Triumph TR2 - 4A***

ISBN 1-903706-80-7

Two new books by Roger Williams, published by Veloce Publishing. Both are excellent books, and both have chapters on "Engine Transplants," as they are referred to in the UK. They should be readily available in the US soon. The TR5, 250, 6 book can be bought now from the 6-Pack Triumph club.

Many of you are familiar with Roger's How To Give Your MGB V8 Power, as well as the many others he has written, so you know these two new books will make an excellent addition to your library. Your editor has had the privilege of reading both books, and he heartily recommends them. There is a wealth of good solid information in both, including but not limited to brake, chassis, electrical, etc, improvements, in addition to the material of most interest to us on engine swapping.





## MARKETPLACE

### For Sale:

#### Range Rover 3.9L EFI V8 Engine:

I am parting out a Range Rover of 1990 vintage. Because I bought it for the body for one of my own Rovers, I have a V8 engine I don't really need.

It's a 3.9L EFI V8 with a Lucas 14CUX EFI system on it. This can be had complete with the EFI system, or if you want a replacement for a carburetted car I would be willing to sell the long block. Complete with EFI and accessories (alternator, PS pump) I'd like to get \$900/OBO for it. The long block I'd be willing to let go for \$400. All of this is plus packing and crating, of course, from northern Massachusetts (Chelmsford area).

The EFI system itself is also available as a complete unit. I'm disassembling the car myself, so I can easily provide the complete wiring harness for the computer system, relays and the like, as well as schematics for the EFI system. The vehicle was functional when I started to disassemble it, though given its age I might think about a set of rings and bearings if I had my way before installing it into a new vehicle

I may be reached at mrchurchill109@yahoo.com if desired.

Alan J. Richer  
Chelmsford, MA

#### 1979 MGB/Buick V8:

3/4 Cam. Engine completely rebuilt. Many new and special parts. Call for details. \$10,500 OBO.

Robert Franzen



6542 Fredonia Circle  
Stevensville, MI  
269-465-0151 Home  
269-921-8191 Cell

#### Devin - 215 V8 Vintage Racing Project:

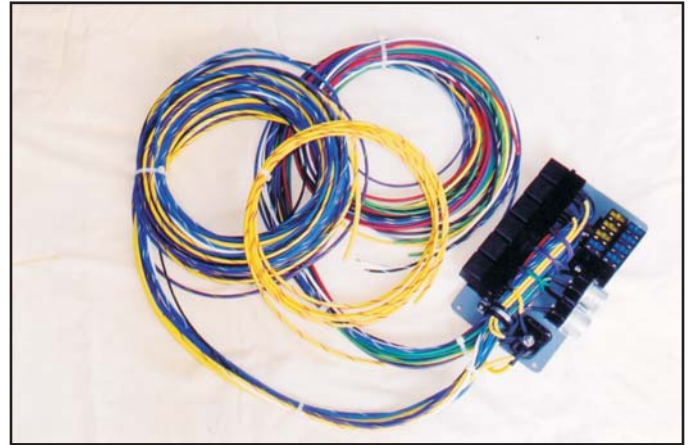
Devin body. TR4 chassis & suspension. Three 215 V8s (two Buick, one Olds). Corvette gearbox. Two TR4 rear axles. Manuals, articles, etc. Much more. Call for details.

Paul Fanning  
Chicago, IL  
773-925-1221

#### Wiring Harnesses:

I have a few wiring harnesses completed, ready for sale, for MGBs and TR6s. These are wiring harnesses as described in the May - August issue of the Newsletter, with improvements. Please understand, I am NOT selling these as a commercial endeavor, rather in response to requests from friends. As such,

they are sold as-is, with no warranty whatever. I have designed and built these to the best of my knowledge, but I am not a professional, I'm not licensed or certified, nor do I have the facilities to properly test and certify them as adequate for their intended purpose.



These wiring panels come with either 6 or 7 relays, depending on model, 8 fuses, two flashers, and all the wire, terminals, connectors, etc, required to completely rewire your car, replacing ALL the electrical system, and using the correct color coded wires. A fairly comprehensive instruction manual is also provided.

Price for the kits is \$300 plus \$15 shipping/handling.

Dan Masters  
C/O DMP  
PO Box 6430  
Maryville, TN 37802-6430

## COMING EVENTS

### British V8 2004 East

August 2004, Grand Rapids, MI  
Contact Steve Carrick (mgbv8@iserv.net)

### British V8 2004 West

July 2004, Southern California  
Contact Bill Guzman (bg.gtv6@verizon.net)

### British V8 2005 East

June 2005, Terre haute, IN  
Contact Dave Kirkman (mg.kirkman@verizon.net)

### British V8 2005 West

Anyone want to volunteer?

At this time, planning for these events are in the preliminary stages. More information will be provided in the newsletter and on the newsletter web site as it becomes available. In the meantime, contact the individuals listed above and let them know what you think. The more input from you, the better the events will be.

## **HOW IT WAS DONE #1**

**Owner:** Christopher Trace

**Beeton, Ontario, Canada**

**catrace@rogers.com**

**Model:** 1974 ½ Triumph TR6

**Engine:** Ford 302

**Engine:** Ford 302 bored out to 310ci, and completely rebuilt. Aluminum high-compression pistons are used with 1/16th" chrome-moly rings. A mild Crane cam (towing grind) is used. A heavy duty oil pump and shaft helps to prolong engine life.

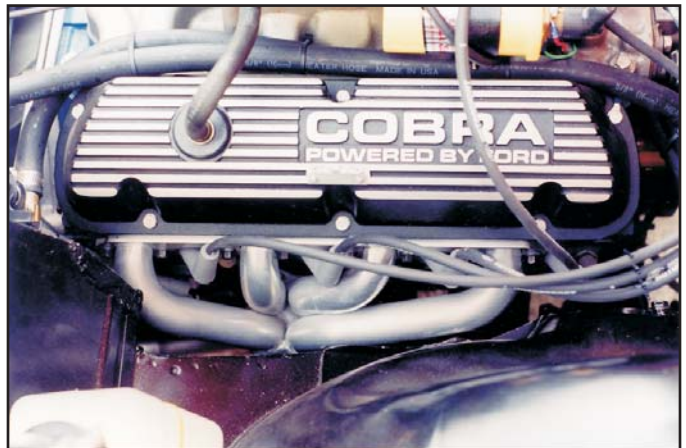
**Intake:** A Holley 600cfm 4 barrel carburetor sits on an Edelbrock Torquer II manifold, and breathes through a side draft air cleaner. A heat shield is slipped between the carburetor and the manifold.

**Engine Electrical:** An Accel distributor feeds an electronic ignition system and a high output coil.

**Transmission/Drivetrain:** Transmission is a BW T5 World Class 5-speed with a Hurst shifter. A Centerforce dual-friction clutch is actuated by a Tilton hydraulic throw-out bearing. Power is sent to the rear by way of a custom made 2 ½" drive shaft.

**Cooling System:** A Stewart Stage 1 water pump circulates coolant through a Griffen cross-flow radiator, where it is cooled by a 16" electric cooling fan in a "pusher" configuration. A fan shroud is provided to ensure all the air flows through the radiator instead of around it.

**Exhaust System:** A set of Sanderson street rod headers, ceramic coated, send the spent gases through a custom made stainless steel exhaust system.



**Rear Axle:** The stock IRS differential is retained, but it has been rebuilt, as have the rear hub assemblies, with new U-joints all around. The differential is now suspended with polyurethane bushings. The differential mounting brackets have been reinforced.

**Front Suspension:** KYB shocks are used, along with new springs and polyurethane bushings. A new sway bar was fitted.

**Rear Suspension:** Lever action shocks have been replaced with a tube shock conversion. New springs and polyurethane bushings are used, along with a rear sway bar.

**Brakes:** A complete new brake system has been installed - M/C, wheel cylinders, brake lines, pads, discs, and drums - and braided stainless steel lines are used for the flex-lines. Toyota 4-pot calipers are used in front, and 7/8" Sunbeam Alpine rear wheel cylinders are used. Brake fluid is Silicon DOT 5.

**Wheels/Tires:** Pirelli P6000 Sport Veloce 215/65/R15 tires are fitted to 15X6 Panasport aluminum wheels.

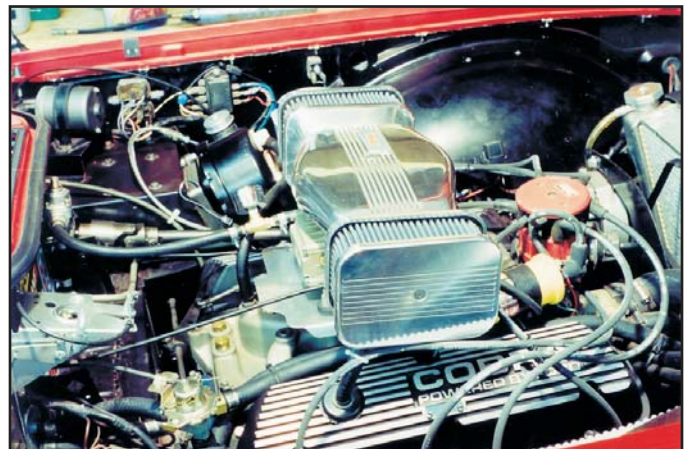
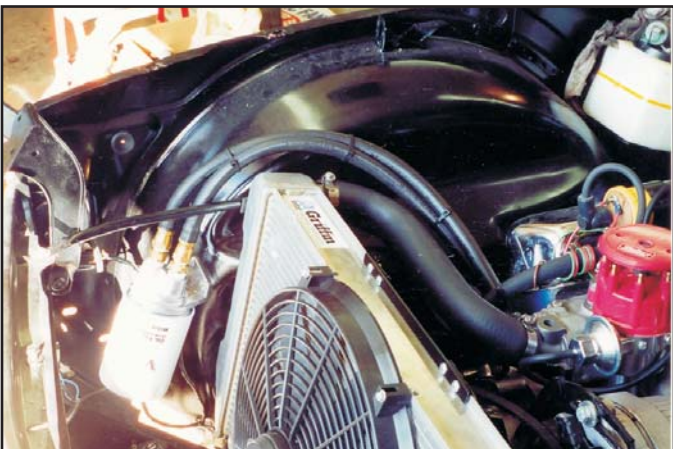
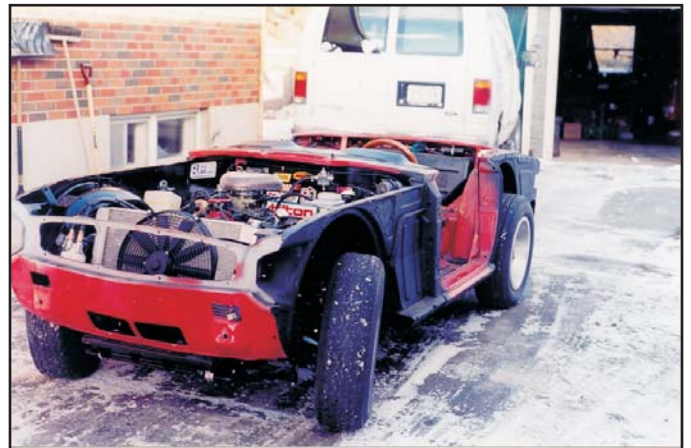
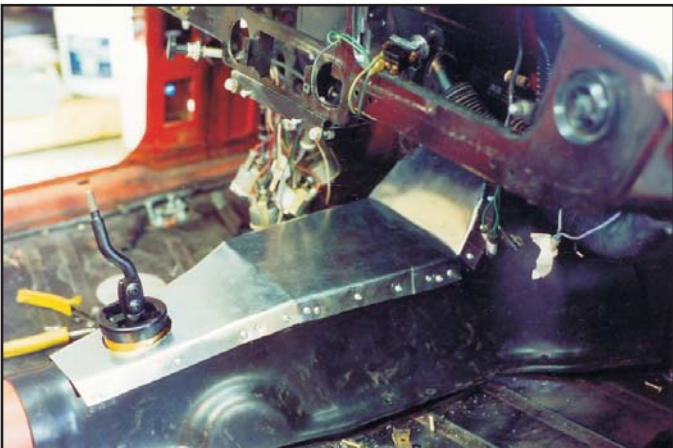
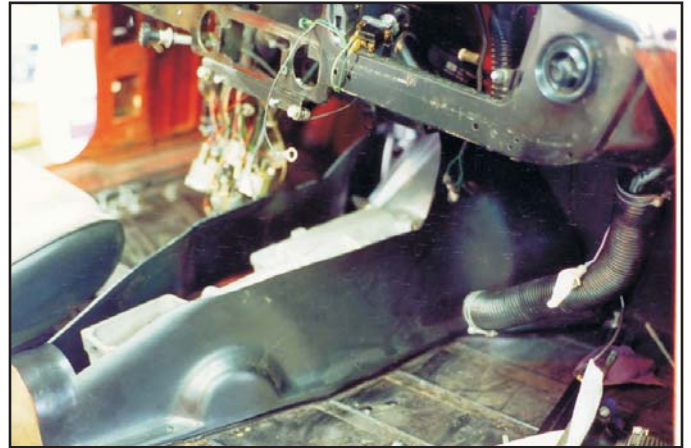
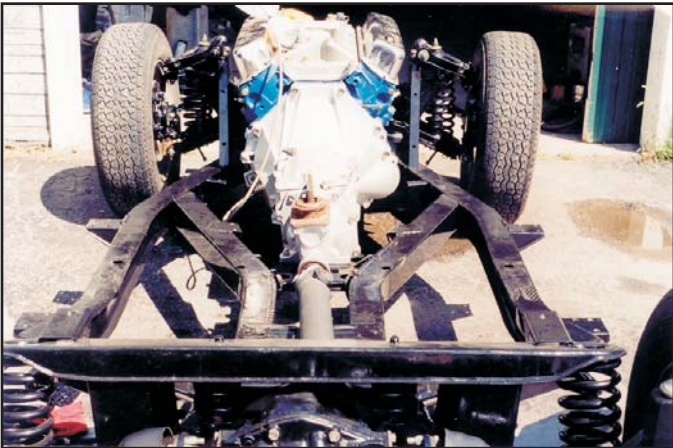
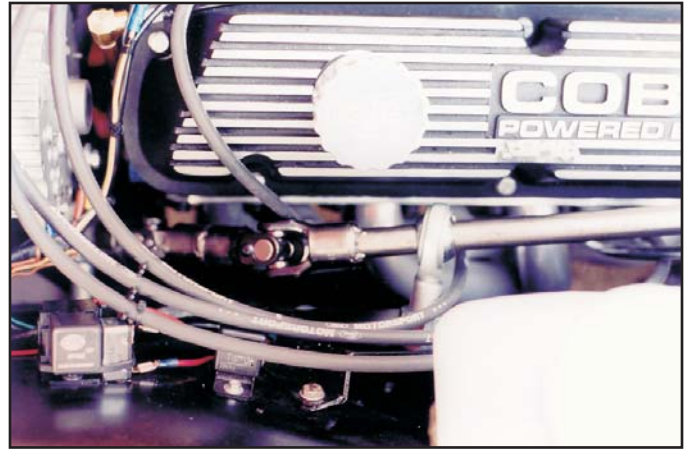
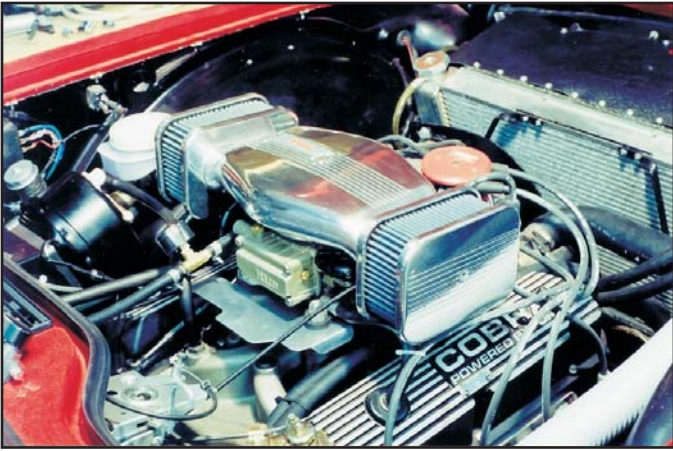
**Interior:** Seat rebuilt with new foam, diaphragms, and leather seat covers. New carpets installed, with double underlay and heat shield. Dash has been re-veneered and an Alpine stereo system added. For comfort, fresh air ducts vent cool air to the footwells. The old top has been replaced with new.

**Body:** Six coats of Sikkens Rio Red acrylic urethane paint.

**Electrical:** GM alternator replaces the anemic Lucas unit. All wiring bullets have been replaced. Headlamps are now Halogen.

**Fasteners:** All load bearing points have grade 8 fasteners. All other points are stainless steel. **V3**







## JUICED STROKER MOTOR

By Kurt Schley

Dan LaGrou of D & D Fabrications recently completed another of his specialty stroker motors. This one is a 269" stroker engine destined for Mike Domanowski's MGB V8. (Actually,



the MGB is owned by Mike's wife, Amy Sue.) Mike is currently running a stock displacement Olds 215 with nitrous. When the stroker motor replaces the stocker, the nitrous system will be transplanted to the new motor. Hence the stroker motor was



equipped with APR head studs, replacing the standard bolts, to withstand the cylinder pressure when on the juice. Added insurance is provided by a rare '62 - '63 Oldsmobile Jetfire (turbocharged) block. The Jetfire block has main bearing caps which are beefier than the standard 215 versions and the 12-point

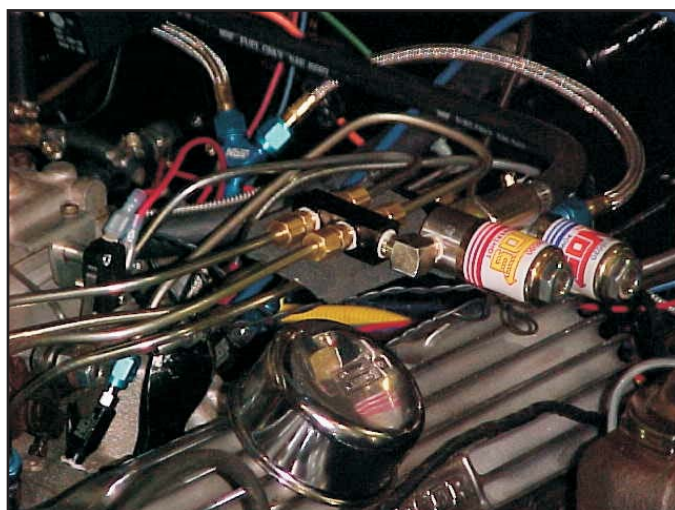
bolts securing the caps top the blocks were also a factory upgrade.

Of special interest are the Olds 10.25:1 compression heads. The heads have received extensive porting and rework, with huge 1.00" x 1.75" intake ports and 1.10" x 1.60" exhausts. The heads were originally built and modified for use on a racing marine engine, but the boat never hit the water. The large ports



will help immensely with feeding the stroker engine, as the 215 engines are historically head restricted insofar as making big HP.

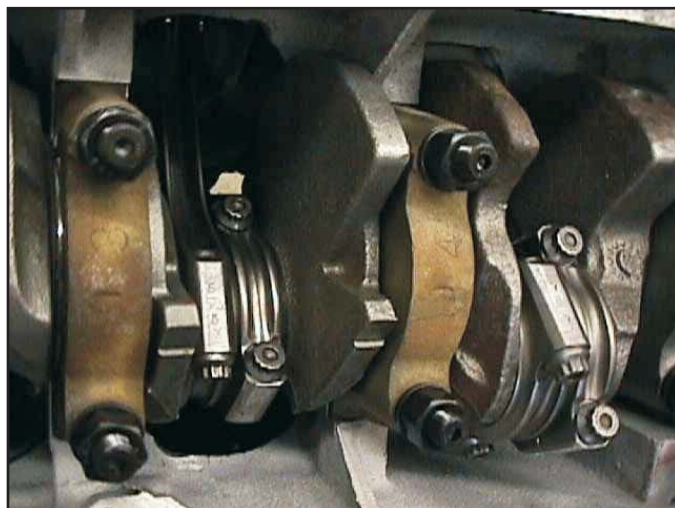
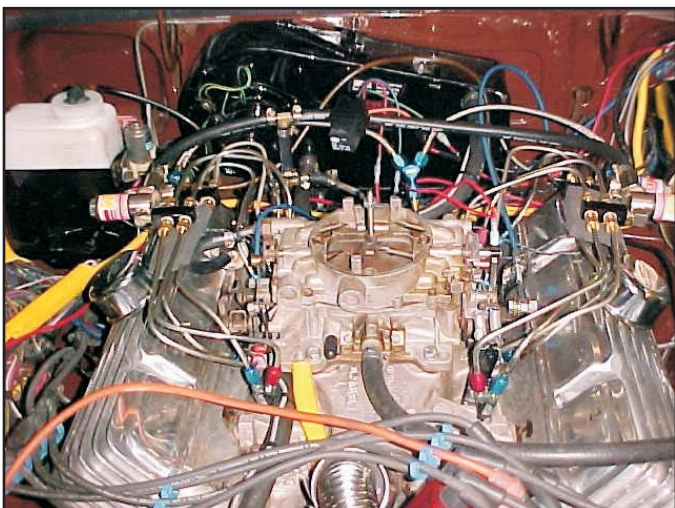
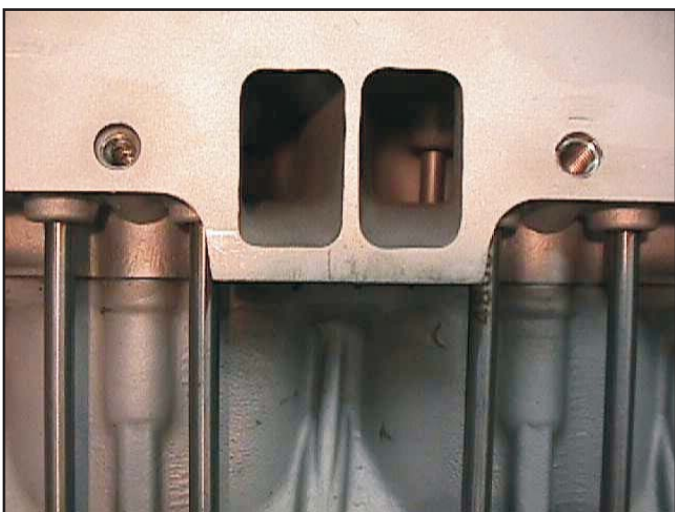
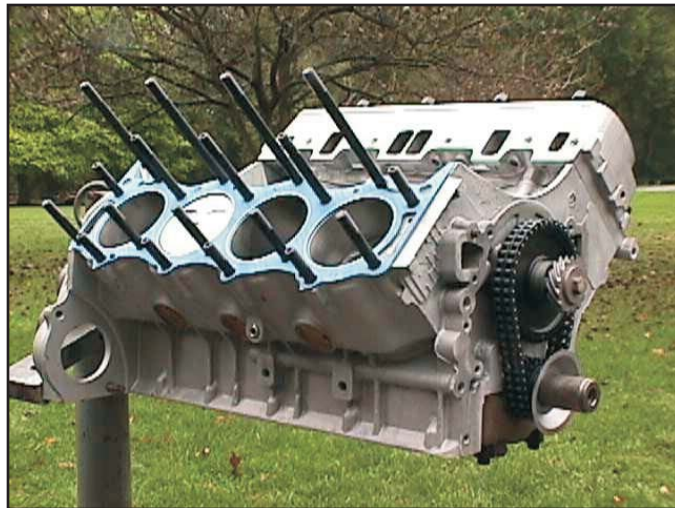
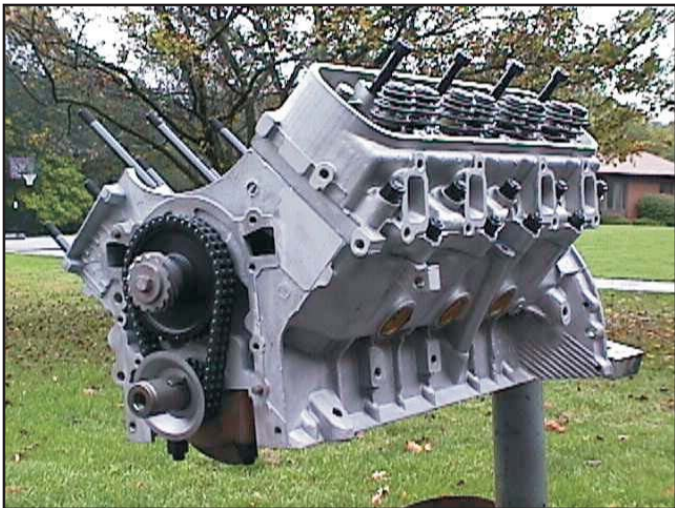
Amy Sue's MG also has several other upgrades including a Ford/Currie 9 inch rear end sporting 3.00:1 final drive ratio and



Ford Explorer rear disc brakes. A Griffin custom aluminum radiator, designed by M&G Vintage and Mike, does cooling duty. A MasterPower brake system (dual master cylinder & booster) replaced the stock system. Spark is handled by an MSD billet distributor and 6AL control box. The current rev limiter is

Displacement: 269"	Compression Height: 1.580"	Con Rod: Eagle EAGCRS570053D
Bore: 3.530"	Compression ratio: 10.3:1	(5.70" length)
Stroke: 3.4" (Buick 300 crankshaft)	Intake valve: 1.625"	Rings: Hastings 2M5650 +.030"
Block: Olds Jetfire	Exhaust Valve: 1.425"	Rocker Arms: Stock Olds 215
Heads Olds -829	Valve Spring: D & D 813	Flywheel: D & D 467025
Piston: TRW 2492-F	Lifter: D & D 896	Pressure Plate: D & D 360700
Deck Height: .000"	Camshaft: Crower 50232	Clutch Disc: D & D 26027
Chamber Volume: 41cc	Head gasket: .040" composite	





set for 6000, but Dan LaGrou advises that the new motor will withstand 7500 rpm.

The nitrous system is a NOS Sportsman Fogger installation and fabrication by Jeff at Action Cycle. Jeff also did the nitrous system on Mike's 1980 Kawasaki KZ1300 bike. The system incorporates direct injection into each individual runner on the intake manifold. The NOS system is capable of delivering a 300 HP shot to the engine, but Mike has been running only a 80 HP

shot on the almost stock Olds 215 currently in the car. The current engine has had some head work done, but not nearly as much as in the new engine. Along with the new engine, Amy Sue's "B" will get a T5 World Class 5-speed transmission, also sourced from D & D Fabrications. The new motor and trans are scheduled for installation soon, and Mike and Amy Sue are hoping for 500+ HP to the rear wheels. Look for an updated status report after the car and engine have a few miles on them. **VE**



## HOW IT WAS DONE #2

**Owner:** Tony Thiel

**Aurora, Oregon**

**503-678-1865**

**Model:** 1965 MGB Roadster

**Engine:** Ford 289

**Engine:** Ford 289 from a 1964 Ford Fairlane. Bore: 4.000", Stroke: 2.870. Crane cam with a 0.500" lift and a 300° duration at a 0.050" lift. Cylinder heads are 351 Ford, and have been port matched, and the pockets have been cleaned up. A high volume oil pump is used, along with a remote oil filter and oil cooler. The oil pan has been modified to hold 8 quarts.

**Intake:** A 700cfm Holley sits atop an Edelbrock Performer manifold. Throttle linkage is from Lokar.

**Transmission/Drivetrain:** A 4-speed T-10 from a Mustang is linked to the engine by an aluminum bellhousing from a Fairlane, and a Hayes "street/Strip" clutch. A Chevy truck M/C feeds an MG S/C.

lower radiator, both of brass construction. Water pump is an Edelbrock aluminum unit. Cooling air flow is provided by a mechanical puller fan from Hayden, pulling through a custom fan shroud.



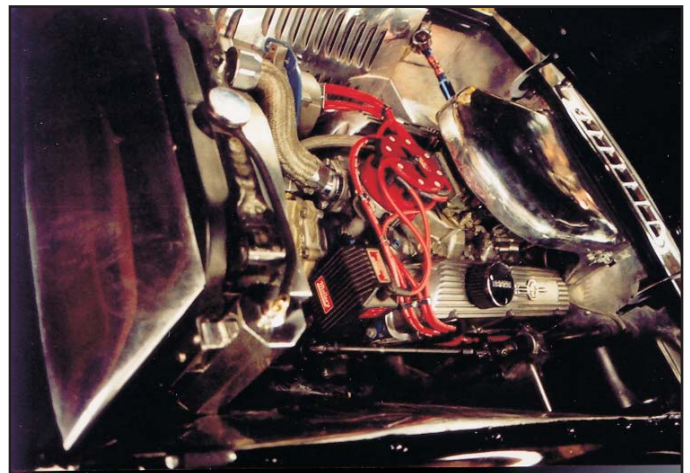
**Exhaust System:** Headman *Street Rod* headers, with a 1 5/8" primary tube ID feeding 2 *Superflow* turbo type mufflers. Exhaust pipe is 2 1/2" ID into one 4" pipe. A crossover pipe is used.

**Rear Axle:** A Ford 9" from a Torino, narrowed 3" per side. A Ford clutch-pak LS differential, with a 3.00:1 ratio is used.

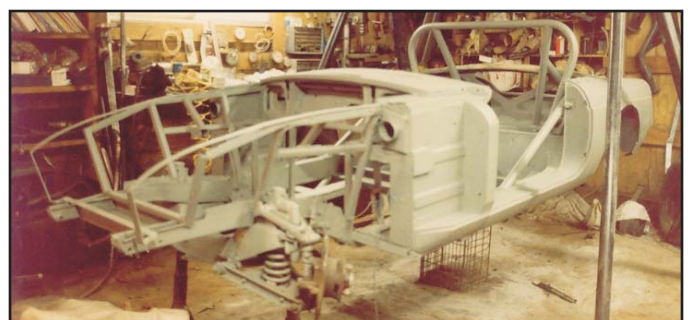
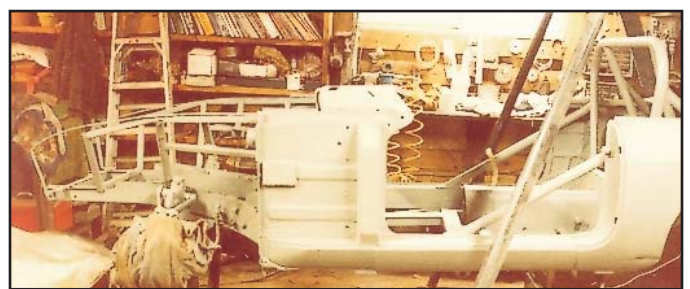
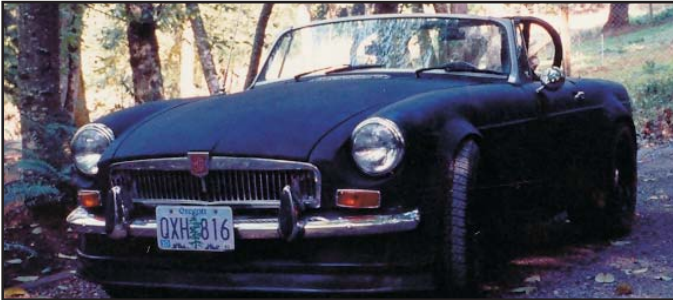
**Suspension:** Tube shocks replace the standard lever arms, front



**Cooling System:** Cooling is provided by two radiators - a down-flow upper radiator from a Ford van, and a custom cross-flow







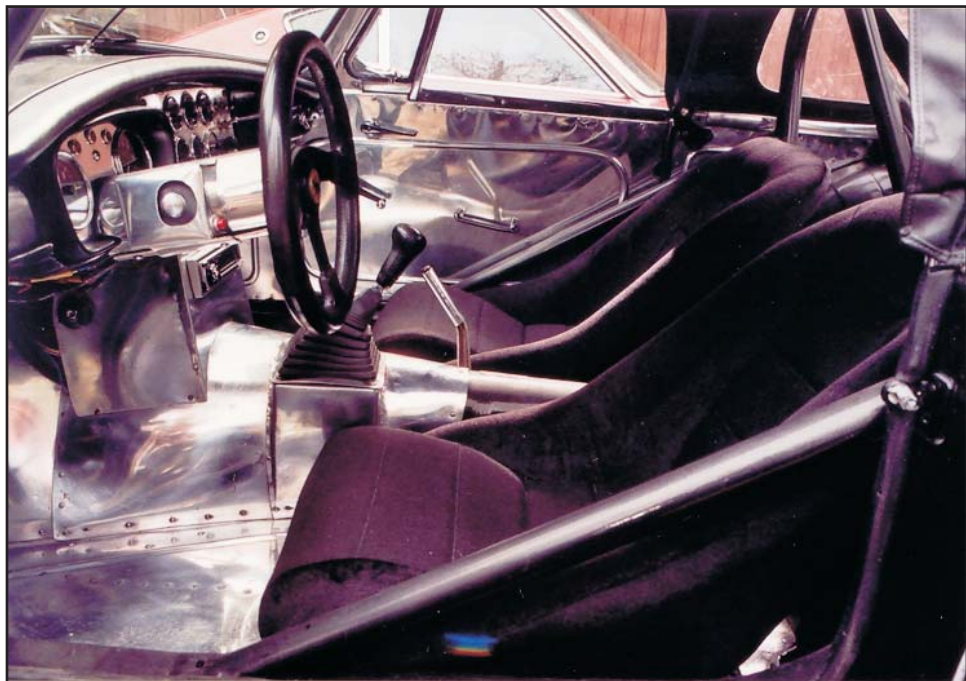


and rear, and all stock bushings were replaced with polyurethane. A custom sway bar was added to the front, and a custom traction bar was added at the rear.

**Front Brakes:** Ford Ranger hubs were bolted to the MGB spindles (they fit!). Calipers and ventilated rotors came from the same Ford Ranger.

**Interior:** The entire interior, including floor, firewall, and rear bulkhead, is custom fabricated from aluminum. Seats are Corbeau.

**Body:** Fenders flared, custom front air-dam, gas filler moved to inside trunk, third brake light added, recessed into a custom pocket in the roll-bar.



**Rear Brakes:** Ford Torino 10.4" drums (stock on the Torino axle).

**Wheels/Tires:** 15 x 7 Panasports with 225/60/15 Michelin Pilots on front. Steel 15 x 8 (waiting for Panasports) with 235/60/15 Michellin Pilots on rear.

**Electrical:** Starter and alternator are Ford. Wiring harness is homemade, and stock gauges have been replaced with VDO.

**Frame:** Has been extensively modified and reinforced, with a roll bar welded in place with additional tubes welded to the rear frame rails and to the under-door frame rails.

**Conversion Performed By:** Owner.

**Estimated Cost:** "Stopped counting years ago!"

**Miles Driven Since Conversion:** 25,000.

**Performance Data:** 15.3 @ 94mph in the quarter mile. "Chickened out" before top speed determined.

**Problems Encountered Since Completion:** Aluminum interior is too hot in traffic on hot days.

**Source Of Parts/Conversion Information:** Faspac (Portland British Car Parts), Moss Motors, NAPA, Baxter's Auto Parts, Race Central (Portland Race Car Parts). "Most of my information came from hot rodding and reading hot rod type magazines.

**Conversions Advice:** "I would advise most people to buy a book by Roger Parker and follow the traditional conversion methods. If you like to make your own parts and spending hours trying to figure out how to make something work, then you could do it the way I did."

**Things I would Do Different on the Next Conversion:** "I would use lighter materials on many of the parts that were made for the car. I wouldn't have used the 9" Ford (too heavy) unless I was Planning on making about 800HP."

**Additional Comments/Suggestions:** " I love seeing what other people have done to their little British cars. I also have a Jag XJ6 with a Lincoln 460 engine (stock) and transmission. 🚗"



## **HOW IT WAS DONE #3**

**Owner:** Bob Edgeworth

**Richmond, VA**

**MGBob25@aol.com**

**804-270-7853**

**Model:** 1972 MGB Roadster

**Engine:** Rover 3500 SDI

**Engine:** 1981 Rover SD1 3.5L V8. Crower 50230 cam, 0.445" lift on intake, 0.048 exhaust. Duration at 0.050" lift = 202° intake, 210° exhaust. Lobe separation angle of 108°. Engine has been bored 0.030", 10.5:1 compression ratio pistons, completely balanced and blueprinted.

**Intake:** Lucas air flow electronic fuel injection system. Cable throttle linkage. K&N air filter.

**Engine Electrical:** Early model YM distributor reworked with transistor ignition.

**Transmission/Drivetrain:** Rover 5-sp from a Rover 3500 SD1. Gear ratios: 1<sup>st</sup> = 3.32, 2<sup>nd</sup> = 2.09, 3<sup>rd</sup> = 1.4, 4<sup>th</sup> = 1, 5<sup>th</sup> = 0.83. Rover clutch and throw-out bearing is used, along with an MG M/C and a Triumph S/C. Flywheel and bellhousing are both Rover.



**Cooling System:** An aluminum V-belt Buick water pump, with an MGB V8 radiator and twin electric fans provide cooling. A twin fan setup from a '77 MGB is used in a pusher configuration, controlled by an adjustable thermostat set at 190°. The engine thermostat is a 170° unit. The engine never runs hot.

**Exhaust System:** RV8 headers feed a pair of glass-paks. 2 1/4" pipes exit in front of the rear wheels.

**Rear Axle:** Ford 8" from a '73 Maverick, 3:1 ratio. MGB outer housing tubes were used with Ford truck axles re-splined to fit the MGB hubs.

**Front Suspension:** Lower control bushings are MGBV8 items, along with a 7/8" sway bar.

**Rear Suspension:** Composite springs and traction bars.



**Brakes:** Rear brakes are stock. Cross drilled rotors, MGBV8 brake pads, and stainless steel brake hoses on the front. Silicon fluid is used.

**Wheels/Tires:** Michelin XSE 195/60/15 tires are mounted on 6.5 X 15 Panasport wheels.

**Interior:** Stock.

**Body:** Stock.

**Electrical:** A 100 amp Motorola alternator, and a Weber gear reduction starter.

**Frame:** Stock.

**Conversion Performed By:** All work except the machine work on the engine was done by the owner.

**Estimated Cost:** \$6,500.

**Date Conversion Completed:** September 15, 2000. Driven over 6,000 trouble free miles since.

**Performance Data:** Not yet tested.

**Problems Encountered Since Completion:** None.

**Source Of Parts/Conversion Information:** D&D Fabrication, Towery's Foreign Car Service, Jim Swenson at Foreign Car Service.

**Conversions Advice:** Do a lot of research, talk to someone who has done a conversion.

**Things you would do different on the next conversion:** Nothing.

**Additional comments/suggestions:** Car has lots of power and gets 32 MPG! 🇺🇸



## 289 ci STROKER MOTOR - PART 1

By Kurt Schley

Long-time readers of the Newsletter may remember that several times over the last five years or so, I have claimed that I was on the threshold of an MGA V8 project. Due to a combination of increased hours required at my job, a home relocation, assisting my father in building and moving into a new home (400 feet behind mine) and other factors *ad nauseum*, the MGA shell and chassis have been sitting untouched and forlorn. However, circumstances have finally combined to allow the project's initiation. First on the agenda will be building the MGA's engine, as it will temporarily replace the worn out Olds 215 in my '74 MGB. After a season's tuning and break in, the new engine will be pulled and stored until the "A" is ready.

I had originally planned a stock displacement Olds 215 with longer connecting rods, i.e. Buick 300. There are several advantages to a long-rod engine. I had collected most of the components for this engine when fate intervened in the form of a phone call from Dan LaGrou at D & D Fabrications. Dan had purchased an Olds stroker motor and had everything except the heads available. It seems that the engine was originally built many years ago to power a racing hydroplane boat (for which the 215 engine was a popular mill). The engine was apparently built, run on a test stand or a dyno only once for a short period of time, never installed into the hydroplane, and stored. Eventually the boat and engine's owner passed away and the combination was purchased by a fellow in Arizona. The new owner had no plans to use the aluminum V8 and contacted Dan. When the motor eventually made it to the D & D shop in Michigan, it was pretty much an unknown entity. The heads were found to have been extensively ported and were soon shipped off to one of Dan's customer's, leaving the balance of the engine on the engine stand.

When the heads and oil pans were removed, the long block turned out to be a treasure trove of mid-sixties Mickey Thompson speed parts. A 3-3/4" welded crank (yielding 289 cubic inches), boxed connecting rods, M/T pistons, roller cam and roller lifters, reinforced cam gears, and a block machined for the crank and rod clearances. The main bearing caps are reinforced with massive steel supports about an inch thick. The pistons show just a hint of heat tint, evidence of only a few minutes running time.

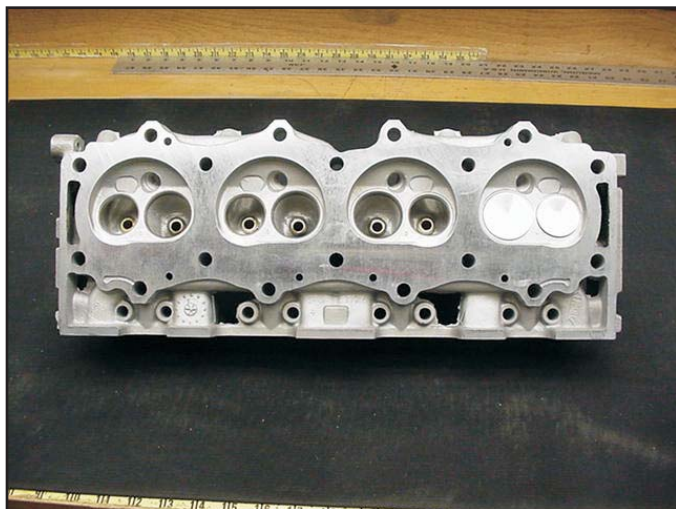


Photo 1:



Photo 2:

Over the next few months, I will be going over each component of the engine, measuring, cleaning and improving where feasible. For instance, the roller cam is an unknown. I will have to have it "mapped" by a cam expert to figure out the specs and whether it is suitable for street use. The progress of this project will be documented for the Newsletter (Actually, I have mixed emotions about even using all these neat vintage parts in a running motor, due to their rarity. They would look great on the fireplace mantle!).

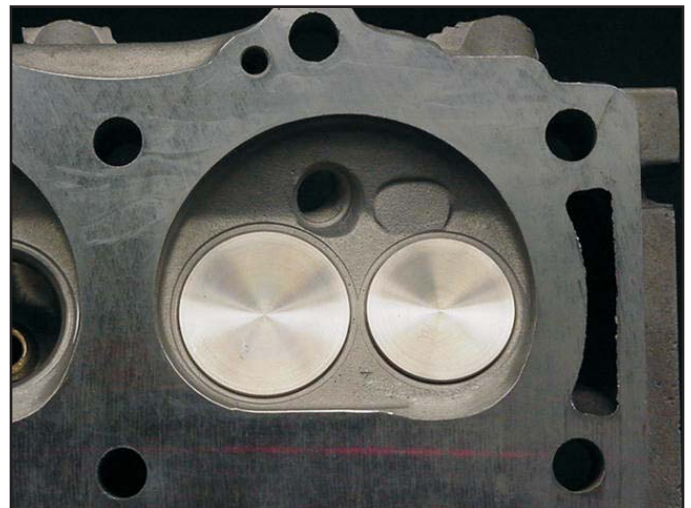


Photo 3:

Being that the engine came to me with no heads, I decided this would be the first problem to be addressed. The Buick/Olds 215, as well as the Rover, V8's, are well known to be head restricted. That means the port size/configuration and the rather smallish valve diameters will not allow sufficient fuel/air flow to make real power. Even mild porting, while entirely worthwhile, will not allow the engine to breathe enough to reach full potential. I could have used modified later Rover heads, but this would have created problems with the valve train and with compression. The pistons/compression ratio were set up for the 51cc (casting suffix -746) low-compression Olds heads. Using Buick/Rover heads with their 37cc chambers, would have resulted in a compression ration in excess of 11.5:1. So, the heads would have to remain

Olds 215, but would require extensive reworking in order to support 289" cid. One favorable factor is that the long stroke will dictate a rather low maximum RPM, somewhat lessening the flow requirements for the heads.



Photo 4:

Participants of the past MG V8 Conventions know Dale Spooner. Dale has been a V8'er for many years and one of the first builders to have put together a well handling Ford 302 small block MGB. In addition, Dale is the proprietor of one of New England's premier engine machine shops, Motion Machine in South Burlington, VT. Motion Machine specializes in the precision machining required for successful high performance and exotic engine building. Many other machine shops routinely send their difficult work over to Dale, such as four valve/cylinder heads, Ferrari and other exotics, as well as rectification of other's bungled jobs. For high performance head work, Dale works closely with Dwayne Porter, a master porting and high performance head expert. Dwayne has his flow bench and porting equipment in the Motion Machine facilities.

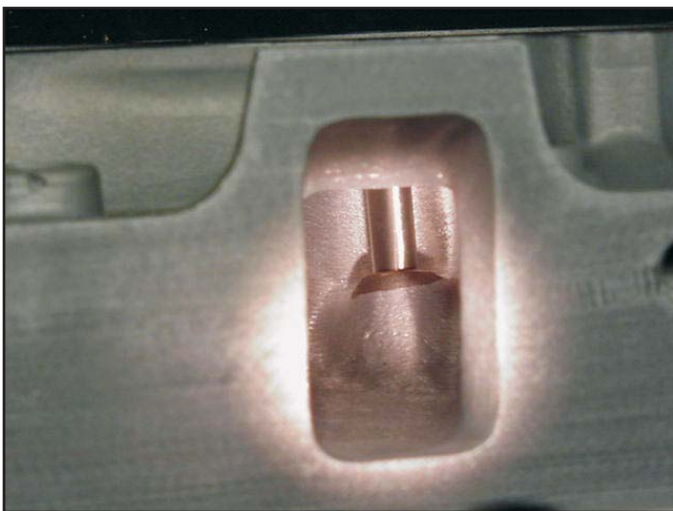


Photo 5:

In conversations with Dale, it was decided to send a set of Olds heads up to him, so that he and Dwayne could decide how best to make the heads flow to their full potential. I also sent a scrap head

for experimental work. A few weeks later, the revamped heads arrived back and they are gorgeous, suitable for display on the living room coffee table! Through extensive machining, component selection and porting, the heads are now capable of flowing enough air/fuel to keep the stroker well supplied. The components are listed below:

- ▶ Intake Valves - Ferrea Racing Components p/n F6223 (Ford 2.3L) 1.74" head diameter, 11/32" dia. stem, 4.8" overall length, .400 tip length
- ▶ Exhaust Valves - Ferrea Racing Components p/n F6224 (Ford 2.3L) 1.500" head diameter 11/32" dia. stem, 4.800 overall length .400 tip length
- ▶ Valve Springs - Competition Cams p/n COM-901-16 (outer spring with damper) 1.500" O.D. 1.080" I.D. 110 lb@1.650" load at checking height, 290 lb@1.150" load at open height, 1.110 coil bind height
- ▶ Spring Retainers - Competition Cams p/n COM-743-16, steel (Chevy-Olds-Pontiac-SB Ford) 7 lock angle

Dwayne performed a baseline flowbench test of the stock Olds head with stock valves. He then proceeded to develop the optimal port shape and size, performing three additional flow bench tests at various stages of the development.

- ▶ Test 1 - Stock Oldsmobile 8.75:1 aluminum head with stock 1.525" dia. intake valves and 1.350" dia. exhaust valves.
- ▶ Test 2 - Basic full port job, intake opened to 1.70" x 1.00", stock valves, 30 back cut on the valves, competition valve job.
- ▶ Test 3 - Basic full port job, intake opened to 1.70" x 1.00", 1.620" dia. intake valve, 1.400" dia. exhaust valve, both valves with 30 back cut, rebled bowls.
- ▶ Test 4 - Basic full port job, intake opening to 1.80" x 1.00", 1.620" dia. intake valve, 1.400" dia. exhaust valve, both valves with 30 back cut, rebled bowls, fully polished runners, more guide streamlining.

The final results showed an approximate 32% increase in intake flow and a whopping 54% in the exhaust flow (both @ .600" lift). Results of the various operations are tabulated on page 16, and contact info for the personnel involved in this make-over are listed below. **VE**

### **CONTACT INFO:**

**Motion Machine**  
**6 Gregory Dr.**  
**S. Burlington, VT 05403**  
**802-658-2629**

**Dewayne Porter**  
**c/o Motion Machine**  
**802-951-1955**

**D & D Fabrications**  
**8005 Tiffany**  
**Almont, MI 48003**  
**810-798-2491**



## HOW IT WAS DONE #4

**Owner:** Don Ziegler  
**City:** Idyllwild, CA  
**Model:** 1965 MGB Roadster  
**Engine:** 3800 GM V6

**Engine:** GM 3800 Series II from a 1996 Pontiac firebird. Custom idler pulleys were required to replace the power steering pump and the A/C unit. A custom adapter plate allowed for a remote oil filter, mounted to the frame between the sway bar and the radiator.



**Intake:** An external fuel pump producing 45 PSI (NAPA European replacement) was mounted after a filter in the right battery compartment.

The original fuel line was used for return and a new 3/8" pressure line added.

The return line enters the tank just to the right of the sending unit. The later fuel tanks may have a port available for return. I am in the process of building a small tank to fit in the right battery compartment, which will be fed by the stock MB pump with a return to the main tank. The high Pressure pump will circulate through this tank.

A K & N filter is placed to the right of the radiator behind the grill.

**Engine electrical:** The PCM and Body Control computers are mounted on the passenger kickpanel. The donor vehicle had a Pass Key II system. A resistor to match the key was connected to the Body Control Module. The BCM sends a signal to the PCM to enable the ignition. Without the enable signal the engine will start, run for 4 seconds and shutdown. The starter system PCM controls are bypassed.

The MG ignition switch still operates the MG solenoid which acts as an interposing relay to the GM starter solenoid.

**Transmission/Drive train:** The GM hydraulic clutch line was adapted to the MG master cylinder. This retains the MG master cylinder and the GM Quick disconnect at the Bellhousing (Slave cylinder is inside the bellhousing). A new 2" heavy wall driveshaft was built to mate with the MG rearend, with 3.909 gears first is useless. I'm looking possibly at an 8" Ford.



**Cooling:** A '65 Falcon radiator was mounted as far forward as possible, requiring cutting of the body panel in front of the original radiator position. The radiator cap was removed, Inlet and Outlets were relocated to the left side and ports to a Sunbird expansion tank which was mounted on the right side firewall shelf.

A 14" electric fan just fits between the radiator and the 7/8" sway bar.

**Exhaust:** Exhaust had to be completely fabricated including flanges (nothing aftermarket was available at the time). 3/8" flanges, 1 5/8" tubing out the fenderwells into 2 1/2" collectors. 2" exhaust pipe "Y" into the Cat, from the cat back is 2 1/4" through a single glasspack (pretty mellow until it opens up).



**Body:** The firewall mods are very similar to a Buick V8 conversion.

The engine and transmission are approximately the same length as the original MGB.

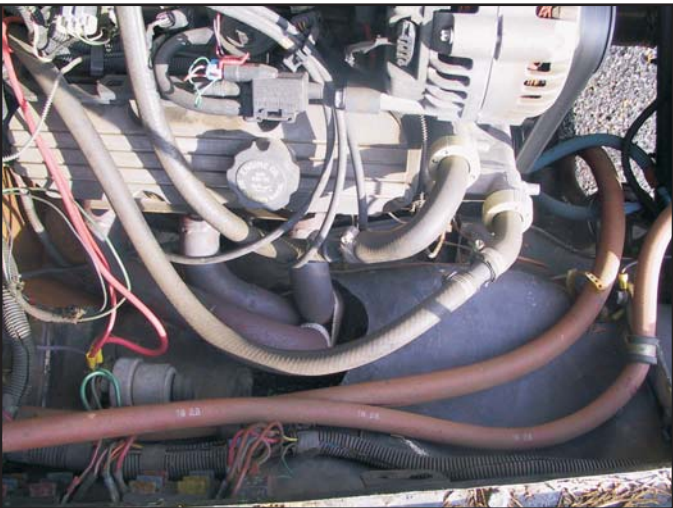
A small bulge on the passenger side of the tunnel was all that was required for transmission clearance. The gearshift lever was modified (offset forward about 3" and to the right about 1") to bring the lever into the correct location.



**Electrical:** 12 fuses now replace the 2 MG fuses. Original Oil and Temp guages were used, while VDO Series 1 tach and speedo were mounted inside the MG housings.

**Frame:** New engine mounts were fabricated and mounted to the crossmember. The MG transmission crossmember was modified and used with the RPO M49 (T5) 5 speed. Two of the original mounting bolts were able to be utilized. Steering has an additional "U" joint just above the frame. The original "U" Joint was replaced with a smaller unit from Borgeson.

**Performance:** With the headers and less restricted K & N Filter it produces approx 210 HP and 240 Torque so hang on. **✓3**



TABULATED TEST RESULTS OF STROKER MOTOR HEAD WORK (continued from page xx)									
EXHAUST - Tests corrected for 28" H <sub>2</sub> O									
LIFT	TEST 1		TEST 2		TEST 3		TEST 4		
	%	CFM	%	CFM	%	CFM	%	CFM	
0.100	69	835	71	36	90	45	91	46	
0.150	75	52	80	55	93	64	92	64	
0.200	64	65	71	73	75	76	77	78	
0.250	72	73	84	85	86	88	88	90	
0.300	76	77	94	96	97	99	99	101	
0.350	78	80	72	105	75	108	77	112	
0.400	80	81	76	110	79	114	81	118	
0.450	58	84	79	114	82	119	85	123	
0.500	58	84	82	119	85	124	87	126	
0.550	58	84	83	120	87	126	89	129	
0.600	58	84	84	122	88	127	90	130	
INTAKE - Tests corrected for 28" H <sub>2</sub> O									
LIFT	TEST 1		TEST 2		TEST 3		TEST 4		
	%	CFM	%	CFM	%	CFM	%	CFM	
0.100	63	43	69	48	74	51	74	51	
0.150	62	63	70	72	76	77	76	77	
0.200	84	85	66	95	72	104	72	104	
0.250	72	104	76	111	88	128	88	128	
0.300	80	116	85	124	81	146	81	147	
0.350	84	122	95	138	88	159	89	161	
0.400	71	128	83	150	93	168	95	172	
0.450	73	133	87	158	93	168	95	173	
0.500	74	134	91	165	94	170	96	174	
0.550	75	136	93	168	95	173	97	176	
0.600	75	136	93	168	95	174	98	178	





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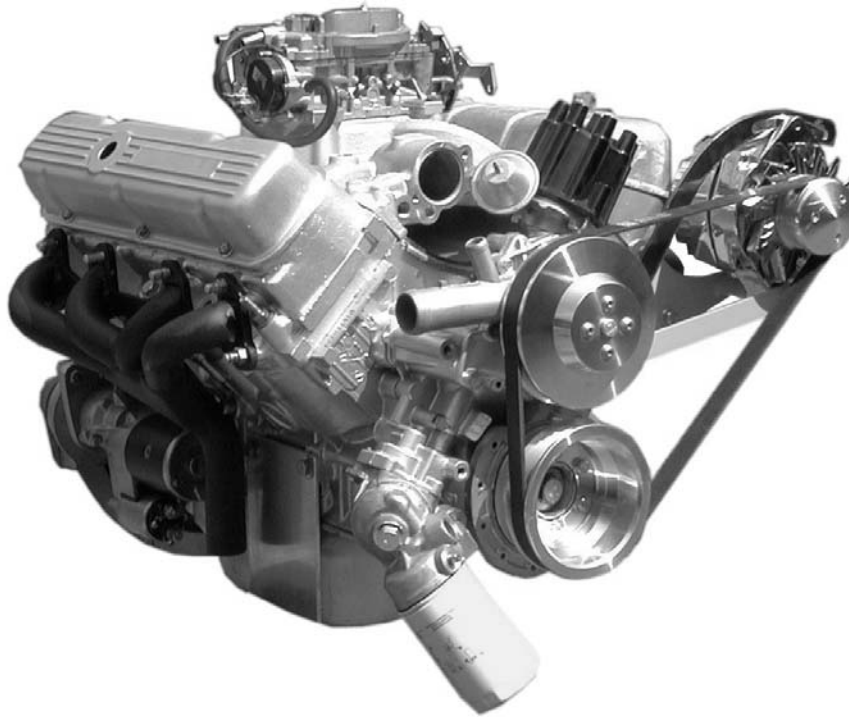
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