

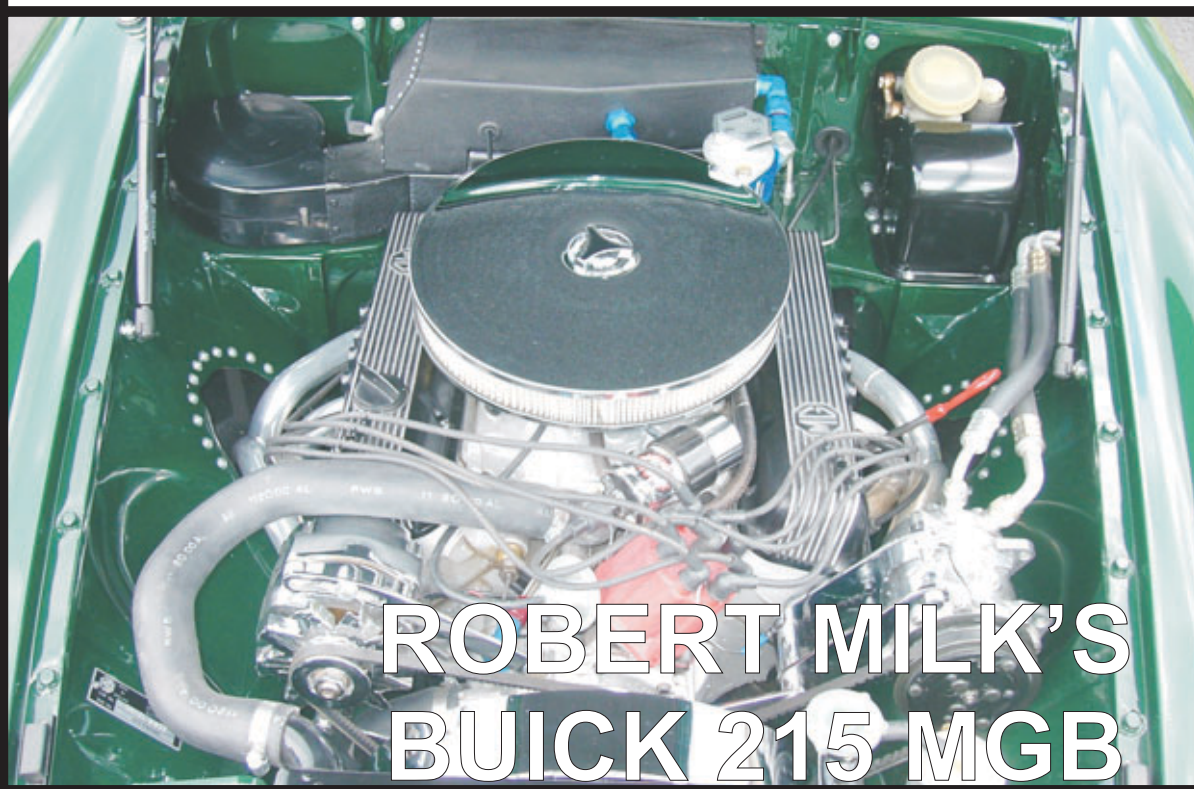
BRITISH V8 NEWSLETTER

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VOLUME XI, NUMBER 2

MAY - AUGUST, 2003



FEATURED STORIES:

- **ROBERT MILK'S MGB/BUICK 215**
- **IS THERE A FORD IN YOUR FUTURE?**
- **BRITISH V8 2003 MEET**
- **MORE ON DANA AXLES**
- **HEADER COMPARISON**
- **AND MORE**

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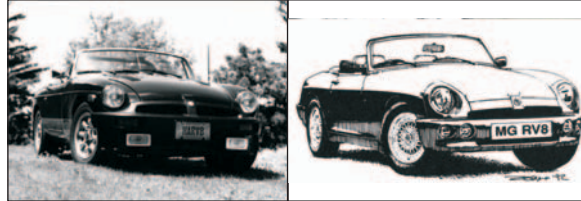
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BRITISH V8 NEWSLETTER

Volume XI, Issue 2

May - August 2003

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will tell you when your subscription expires.**



Ford power - see page 15

FROM THE EDITOR

Time is nature's way of preventing everything from happening at the same time. Given that we can't do everything at once, man has devised schedules to cope with this limitation. To get this newsletter out on time, I had scheduled myself to start on it during the last week in March. That would have given me five weeks before I had to set it aside to put on the British 2003 V8 convention in May, and then another week or so to finish it afterwards. As many of you already know, that didn't happen. Just before I was scheduled to start, I decided that I really needed to cut down that huge Sycamore tree that was buckling my driveway and making such a mess. While standing on a ladder about 20ft off the ground, the branch I was trimming broke off suddenly and unexpectedly, hitting me in the head and knocking me unconscious. The 20ft fall to the ground, and the resulting injuries, pretty much put paid to the idea of getting anything done for a while.

Luckily, I will recover completely from my injuries, but it will be some time yet before I'm back to normal. Currently, I can't spend more than 30-45 minutes at a time working on the computer until the pain forces me to stop. Working 30-45 minutes at a time is no way to get a newsletter out on time. My apologies for the delay, but I'm sure you will all understand. The next newsletter should be out on time.

Speaking of the British V8 2003, were you there? Please forgive me if I'm a little bit biased, but I think this year's convention was a huge success. At least that's what I gathered from the feedback I got. You can read more about it in Pete and Sue Mantell's article beginning on page 3. I was there, and yet I wasn't. Between making sure everything got off as scheduled and nursing my injuries, I didn't really get to participate as much as I would have liked to. All of which makes me doubly excited looking forward to British V8 2004 in Grand Rapids, MI, the last weekend in August. Once again, Steve Carrick is coordinating the event, and if you were in Grand Rapids last year, you know what a superb job Steve and his pals did. Even though last year's event was enjoyed by all, Steve is open to suggestions as to how it could be even better next year. Contact Steve at MGBV8@iserv.net and let him know what you'd like.

How 'bout you guys on the western part of the country? Bill Guzman is planning a British V8 2004 West so you guys can attend without driving all across the country to get there. Plans are still tentative as yet, possibly in Southern California in July or August, but you should contact Bill at bg.gtv6@verizon.net NOW and let him know your desires. The sooner you let him know your feelings, the better he can plan.

Dave Kirkman has stepped up to volunteer to set up the 2005 event, in Terre Haute, IN, probably some time in July. 2005 is a long way off, but it is not at all too soon to start planning. Help Dave help you, contact him now at mg.kirkman@verizon.net and give him your ideas.

British V8 2005 West is still open. Anyone want to step up to the plate and volunteer to coordinate it? Contact me if you are interested. British V8 2006 East may return to Townsend, TN for a rerun if there is enough interest. Is there? Let me know and I'll start planning for it now.

Well, my 30-45 minutes are up now, so I'll close out this editorial and go rest up before I start working on another article.

safety faster

dm

BRITISH V8 2003 ATTENDEE LIST


(Note: the information here as to what car was driven to the event is taken from the registration form, and may not accurately reflect what was actually driven. If no car is listed, no car was entered on the registration form)

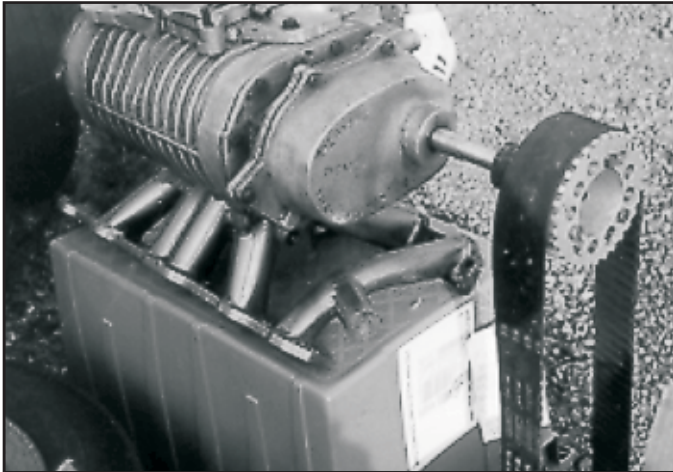
Barrett, Bruce	None listed
Biermann, Ken	None listed
Blackwood, Jim	1971 MGB V8
Boileau, Peter	1975 MGB V8
Lathrop, Ted	1975 TR6 V8
Colley, Chuck	1966 Sunbeam Tiger
Creswick, Graham	1976 MGB V8
Dempsey, Patrick	1980 MGB V8
Domanowski, Michael	1978 MGB V8
Dudley, Bill	2002 Subaru WRX
Floyd, Carl	1979 MGB V8
Fulton, Max	1974 ½ MGB V8
Fulton, Steve	1977 MGB V8
Grills, Arlie	1978 MGB V8
Harvey, Martyn	19?? MGB V8
Hazen, Galen	1974 Jensen-Healey V8
Ingram, Rick	1969 MGC
Joppa, Leroy	1957 Austin-Healey V8
Liechti, Harvey	1971 MGBGT V8
Gano, Ken	1963 TR3
Maloney, Mike	1974 MGB V6
Mantell, Pete	1978 MGB
Maples, David	1974 MGBGT
Masters, Dan	2003 Toyota RAV4
Michel, Dave	19?? MGBGT V8
Milks, Robert	1965 MGB V8
Miller, Jim	1978 MGB V8
Moor, Mike	1973 MGB V8
Moor, Richard	1969 Avenger V6
Posey, Bernie	1979 MGB V8
Renaud, John	1980 MGB V8
Schils, Paul	1973 MGBGT V8
Schley, Kurt	1974 MGB V8
Shockey, Les	1969 TR6 V8
Sidway, Todd	1979 MGB
Strohm, Josh	1974 MGB
Stuart, Jim	1966 MGB V8
Stutz, David	1978 Triumph Spitfire
Trichel, Douglas	None listed
Unger, Jim	1974 ½ MGBGT V8
Vandersteen, Frank	19?? Austin-Healey V8
Walker, Bryan	None listed
Wayne, Steve	19?? MGA V8
Wilker, Jack	1974 ½ MGBGT V8
Willis, John	None listed
Wulf, Al	1967 MGB V8
Webber, John	19?? Sunbeam Tiger
McClain, Robert	19?? MGB V8
Wheat, Bill	1977 MGB
Broom, Justin	1977 MGB V8
Fisher, Jim	1977 MGB V8
Farrel, Preston	1967 TVR Tuscan V8
Eny, Glen	None listed

If your name isn't listed here, shame on you! You should have been there. Next year? Start making plans now, for you sure don't want to miss another great get-together, do you? I know I don't (just hope I'm in shape to enjoy it - no more trees!).

SUPERCHARGER FOR BOP/ROVER 215

By Kurt Schley

I Ran across this at the 2002 Spring Carlisle swap meet. It is a RO34 Wade Supercharger set-up for a Buick/Olds 215. Intake manifold was fabricated from tube and plate, but not a bad job. That pulley shaft sticking 10" out of the front of the blower case would certainly play havoc with the shaft bearings. The vendor wanted \$1200 which was a little steep, as the blower and manifold would definitely need some TLC. Nosing around on the Internet found lots of Wade supercharger info on various UK sites. Apparently it is not uncommon for use on Rover V8's. 

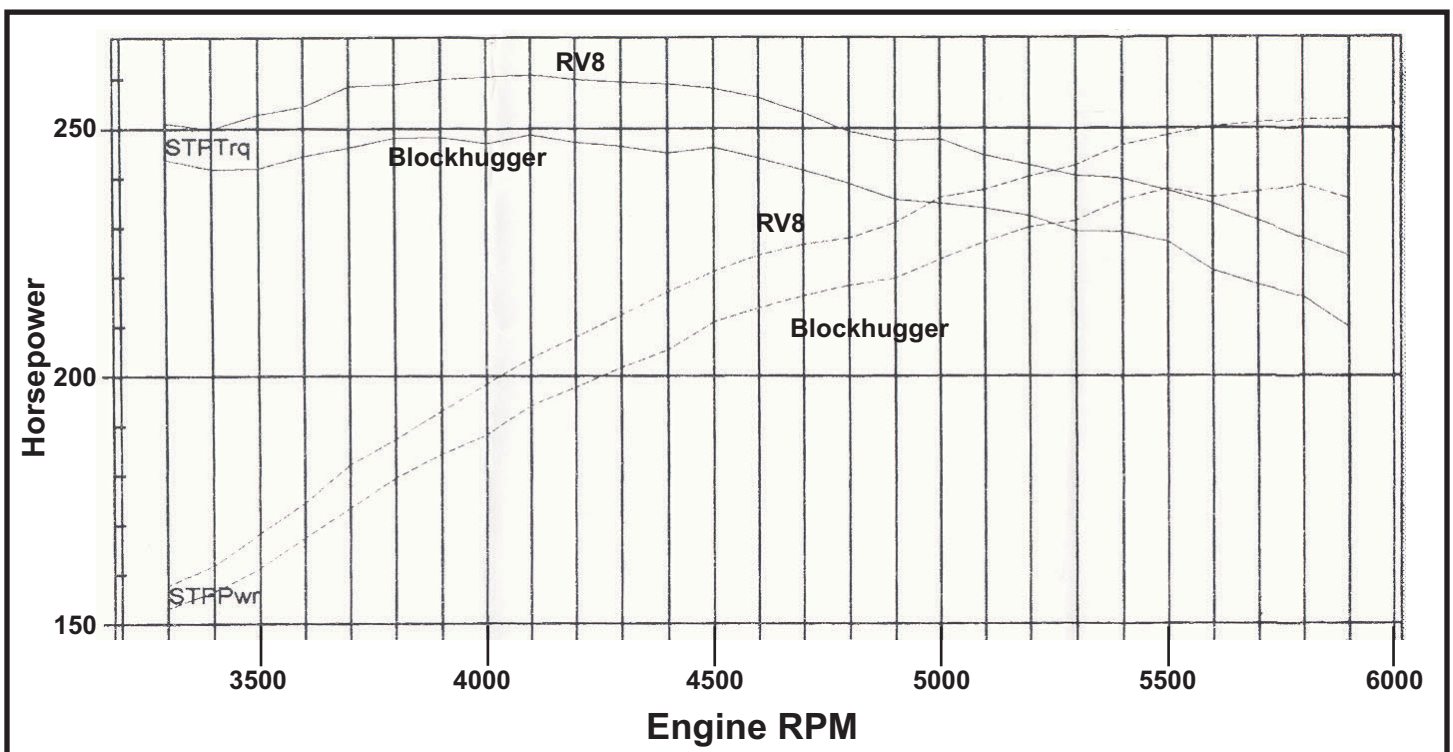


HEADER COMPARISONS

By Kurt Shley

Andy Achauer recently performed a series of dyno tests on a Rover V8, with some interesting results. Among other items compared, a comparison was made using a block hugger header

versus a factory style MG RV8 header. Interestingly, the MG RV8 headers produced more power! Dan Lagrou, of D&D Fabrications, passed on to me the data from two of the dyno runs, shown below. Stay tuned, as Andy has offered to supply more data from the various runs, and we'll be publishing that data in an upcoming newsletter.



THE DANA 44 AXLE

By Dan LaGrou, D & D Fabrications, Inc.

The Dana 44 axle was installed in many different vehicles starting in the early 50's. Jeeps used them for over 40 years, Chevrolet used them in the Corvettes from '80 - '82, Ford used them in the Thunderbirds in '55 & '56 and International used them in the Scouts and pick-ups from '65 - '80. 17 different ratios from 2.87 to 5.89 were available. These axles had 30 splines with a minimum diameter of 1.240", in comparison to the 9" Ford axle that has 28 splines and a minimum diameter of 1.120". See **photo #1**.

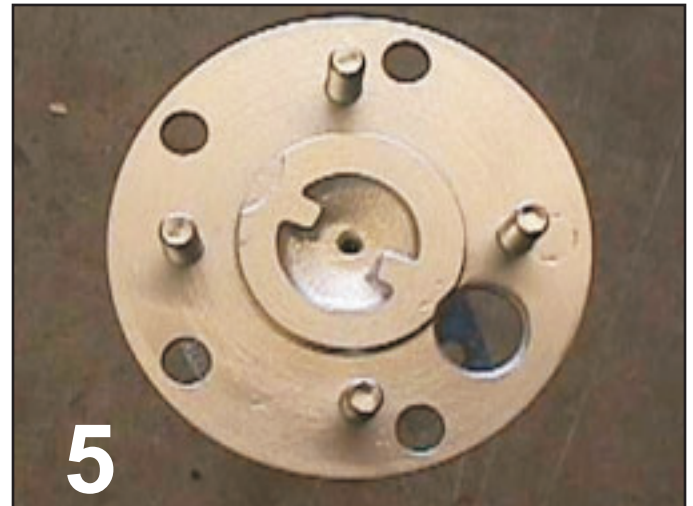
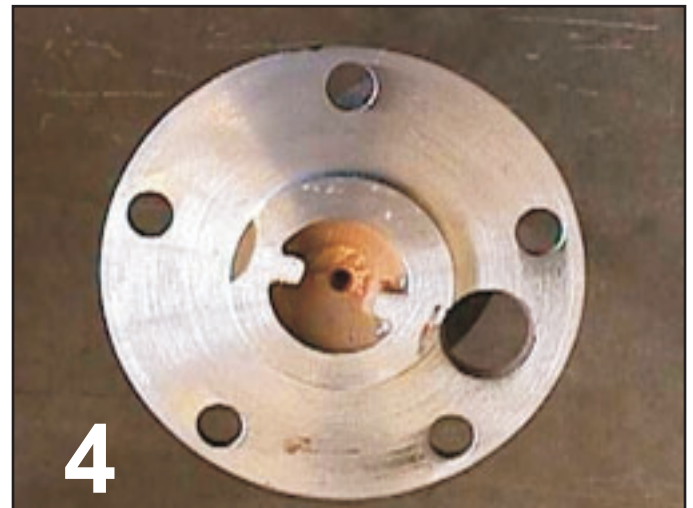


In this article I will concentrate mostly on the Jeep Mail Delivery Truck built in the late 60's to about 1980. They were known as DJ-5's or Jeep Dispatchers. These Jeeps actually had 3 different axles but only 1 is acceptable for use in a MGB. The first, or earliest, axle is 49 inches from wheel mounting surface (flange to flange) and the pinion is offset about 1 1/2" to the right. This axle is too narrow and has too much pinion offset. All of these that I have seen were 3.73 positraction. The second one is the 52 inch axle which is ok on the width but this one also has too much pinion offset for a MG and will cause the driveshaft to interfere with the side of the tunnel. I've only seen this axle in a 3.07 ratio. The third one is a 51 1/2 inch (flange to flange) and only has .400" of an offset. This is the good one. I've seen these

in a 3.07 and a 3.73 ratio, some with positraction and some without. Some early 1970's CJ-5, CJ-7 and Jeepster Commandos may have the 51 1/2 inch axle as well.

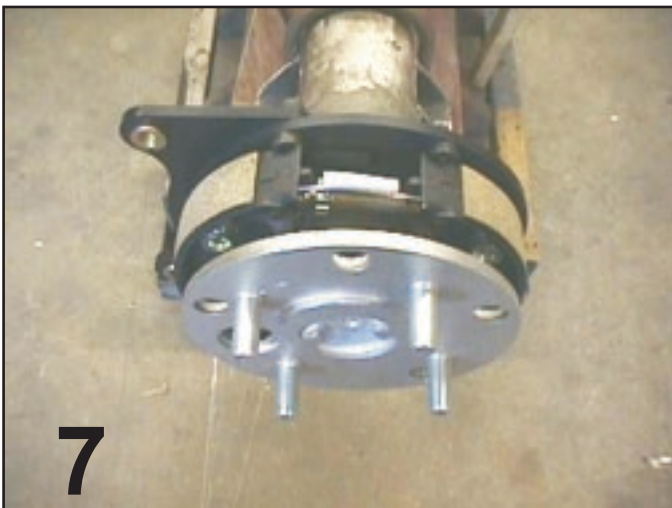
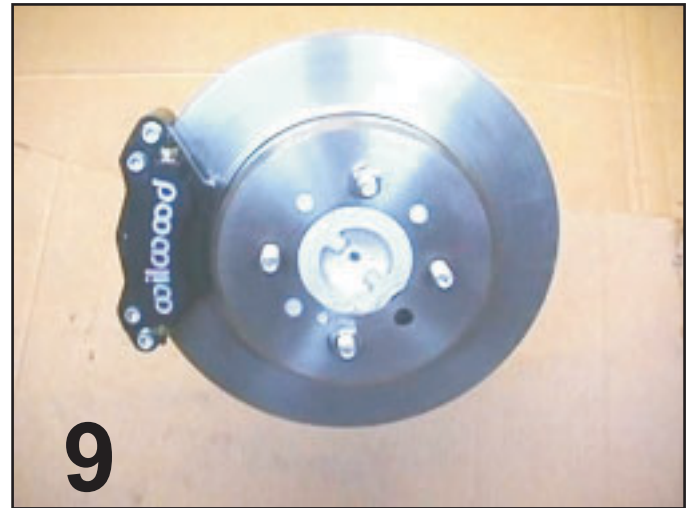


The next thing to do is measure and identify the 51 1/2" axle. Before going to the bone yard cut a piece of wood precisely to 44 1/2" long. Place the wood between the brake backing plates as shown in **photo #2**. The Dana 44 axle flange is quite distinctive and can be identified from 50 ft away, **photo #3**. If it fits and looks like these photographs, take it home!



Once you get it home, disassemble the rear end and machine the axle shafts as shown in **photo # 4**. One of the original wheel stud holes must be plugged and brazed. Then the 4 ½ x 4 wheel pattern can be drilled as shown in **photo # 5**. At this point, a decision must be made as to whether you are going to use disc brakes or drum brakes. If drum brakes are going to be used, it's doubtful all of the original hardware can be found. Ford produces a 10" x 2" drum brake kit that can be purchased from Currie Enterprises, Moser Engineering or John's Industries. The brake backing plate center hole and the mounting holes must be altered and the drum has to be re-drilled for the 4 on 4 ½" pattern. A competent machinist on a Bridgeport type mill can do this. If rear disc brakes are preferred, Wilwood makes a kit for late model Mustangs which are designed for 4 lug wheels. This kit has an internal expanding parking brake system that operates on the inside of the rotor "hat". This design is much better than the mechanical caliper, which clamps on the disc. The Mustang rotors are drilled for 4 on 4 ¼" pattern. It's a simple Bridgeport job to drill 4 additional holes on the 4 ½" pattern to fit MG's. The Wilwood backing plate with parking brake assembly is a little more difficult to modify but turns out exceptionally nice. The center hole must be enlarged slightly, a 1/8" thick spacer ring has to be made for the bearing, and the mounting holes must be re-located on the backing plate for attachment. The backing plate is difficult to assemble to the axle as the shoes, springs, etc. must be on before assembly. It gets very "busy" behind the axle flange as

you can see in **photos # 6 & 7**. The last thing to do is to reduce the thickness of the caliper-mounting lug by .080" to get the caliper centered over the rotor, see **photos # 8 & 9**. **ⓧ**



Pretty, ain't it? This is a D&D built BOP/Rover engine awaiting installation into a customer's car at Fast Car, Inc. I have to admit, it's a lot prettier than a Ford!

BRITISH V8 ARTICLES

Articles of interest from recent publications

Street Rodder - May, June, July, and August 2003. Need help with brakes on your 8" or 9" Ford rear axle? This series of articles will tell you every thing you need to know about installing drum or disc brakes on either of these two popular axles.

Street Rodder - June 2003: There must be a little redneck in each of us, because we all seem to like shiny things. Up until now, the usability of stainless steel fasteners was limited due to their lack of strength. No more! Stainless fasteners are now available in high strength ratings off the shelf. Suppliers of these high grade yet shiny items include: ARP (www.arp-bolts.com) and Totally Stainless (www.totallystainless.com).

Hot Rod - May 2003. Three articles of interest:

First, McCleod has developed a modular bell housing assembly that supposedly allows you to use just about any transmission on just about any engine. This issue of *Hot Rod* has a very comprehensive article on the subject, complete with a chart showing what transmissions can be used with the more popular engines, including the BOP aluminum V8 that we like so much.

Secondly, two articles of interest for V6 aficionados.

►General Motors is set to announce its newest engine offering - an all aluminum, DOHC, state-of-the-art 60° 3.6L V6. Capable of power levels ranging from 200 to 370+HP, and available in both front and rear wheel drive, this engine should be a real hit with the V6 crowd.

►For the V6 fans who prefer the Buick 90° V6, there's good news as well. TA Performance (www.taperformance.com) is now producing a STOUT aluminum replacement block for this engine. Built to run at power levels up to 3000HP - no, that's not a typo, we're actually talking 3000HP - this engine is sure to please. TA Performance also offers aluminum heads to go along with the block, along with other important parts, such as cranks and cams. It's also available in a "stock replacement" version, so you don't HAVE to have 3000HP.

Muscle Mustangs & Fast Fords - July, 2003. In keeping with the apparent Ford engine theme of this issue, there are three articles of interest in this magazine:

►1000 HP from a stroked 327CI small block Ford? Well, they didn't quite make it this issue, as they had problems with the engine set-up, but they did get over 800HP! They promised to be back later to try again for the magic 1000HP number.

►How about 462 streetable HP from a 5.0L? This they did get, in a separate article. The key word here is "streetable." Check it out.

►As if all the above weren't enough, they also did some testing of Ford's newest small block heads, the Z304. The testing they did was on a 351 small block, stroked to 392ci, so the numbers obtained won't be applicable to a standard 302. Nevertheless, the results were pretty impressive, and the new heads should really wake up any small block Ford.

Rod & Custom - May and June, 2003. OK, how's this for a cool trip down nostalgia lane: An early MG TD with an ancient flathead Ford V8. Oh yeah? Well same to you, fellow! Laugh at me if you wish, but would you laugh at Phil Hill? In the early '50s, Hill Campaigned just such a car, and was significantly faster than the competition (actually, he had an MGTC, but even

I wouldn't suggest desecrating a rare classic such as that). This was Phil Hill before he became PHIL HILL, WORLD RACING CHAMPION!

The only thing that kept him from dominating was an overheating problem, caused by an ineffective water pump. This is no longer a problem, as modern technology has produced a adequate water pump for this engine. Yes, this engine is still around, and there are still parts available for it.

I wouldn't expect the young guys in our crowd to have much interest in such a car, but how about us older guys? Surely there must be at least one old coot like me that actually remembers that car when it was actively campaigning, and would enjoy recreating a piece of history? I'm drooling over myself just thinking about it!

For more information on this engine, check out the articles in the May and June issues of Rod & Custom magazine.

Car Craft - July, 2003. Take a stock '91 Mustang 5.0 engine, replace the intake manifold, carburetor, exhaust headers, and bolt on a set of Air Flow Research aluminum heads, and what do you get? How does 400 HP sound? Total cost of the engine modifications needed to get this sinful amount of power? \$2,799.84! Read the Ford engine article in this issue of the Newsletter, and then rush right out and get this issue of Car Craft.

MARKETPLACE

Wanted to buy:

Cowl section from an early model - pre-68 - MGB. This piece is needed to convert a post-68 MGB to accept the steel dash from a pre-68 model.

Ted Lathrop
Fast cars, Inc,
Wayland, MI
269-792-6632
fastcars@chartermi.net

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

July 2005, Terre haute, IN

Contact Dave Kirkman (mg.kirkman@verizon.net)

British V8 2005 West

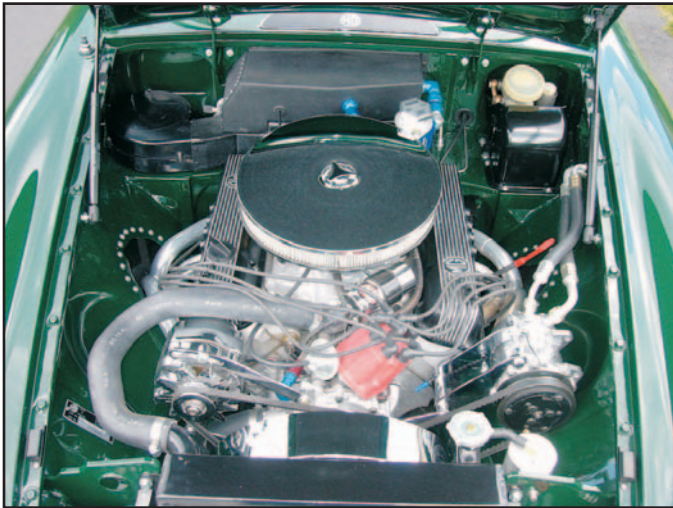
Anyone want to volunteer?

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: Robert & Dreama Milks
Hendersonville, NC
robmilks@mchsi.com
Model: 1965 MGB Roadster
Engine: 1963 Buick

Engine: 1963 Buick 215ci aluminum V8. Bore/Stroke 3.5"/2.8" Cam is a Crower 50232 with an intake lift of 0.488", an exhaust lift of 0.490". Duration at 0.05": intake 214°, exhaust 218°. Lobe Separation Angle: 112°. Cylinder heads are stock, with 1.5" intake and 1.312" exhaust valves. The compression ratio is 9.6:1. The engine is equipped with both lateral and rotational stabilizers. Valve covers are MGB. Engine mounts are Chevy.



A very clean installation!

Intake: A 500CFM Edelbrock 1404 carburetor, jetted by D&D Fabrications, sits atop a stock manifold. Throttle linkage is also from D&D

Engine Electrical: Pertronix igniter module, firing through an MSD 6A control box. All engine bay wiring is hidden.

Transmission/Drive train: Transmission is a BW T5, rebuilt by D&D Fabrications, installed using a Chevy transmission mount. Gear ratios are: 1st: 2.95, 2nd: 1.94, 3rd: 1.34, 4th: 1.00, 5th: 0.63

Clutch is a Weber 10.4", with a Weber HTOB. Flywheel is a 22# steel Weber. M/C has a bore of 3/4". Bellhousing is a D&D Fabrication TransAdapt design.

Cooling System: A V-Belt drives the stock aluminum water pump, feeding an 18" x 18" 4 row brass downflow radiator by D&D Fabrications. Fan is a 16" Derale model 16929 electric unit, mounted in a puller configuration, and housed in a fan shroud. The fan pulls 23.4 amps, and flows 1900CFM.

Exhaust System: RV8 Headers, Jet Hot Coated by D&D, with a 1 3/8" Primary Tube ID. Mufflers are Glasspak + Ansa Tip. Exhaust Pipes are also of 1 3/8" ID.

Rear Axle: A Ford 8", rescued from a Granada, rebuilt and modified to fit by Ted Lathrop, of Fast Cars, Inc, with an Auburn Cone type limited slip differential. The axle ratio is 3.55:1.

Front Suspension: Stock MG which has been lowered by the use of shorter springs. Shock valves have been replaced with heavy duty valves, and a Ron Hopkins Sway bar added to improve the handling. Steering rack is from a late ('77) model.



The roll bar and the wheels are the only clue....

Rear Suspension: Lever type shocks have been replaced with KYB Tube Shocks, Fiberglass Springs replace the original, and a Ron Hopkins sway bar has been added, along with a Panhard rod to keep everything under control.

Brakes: 11.75" Vented Wilwood and C&C Hats in front, 10.75" Solid Drilled Wilwood discs in rear, both by Fast Cars, Inc. Brake M/C was replaced with a Mark II dual unit

Wheels/tires: Front and Rear: Compomotive MO 6.5" x 16" ; 29 mm Offset; 4.9" Backspace, with Dunlop 9000 205/50ZR 16 tires. Fenders were trimmed to the pinch welds for clearance, but flares weren't needed.

Interior: Seats are from a 1990 Mazda Miata, with custom Katskin leather upholstery. The seats are black with green piping. Custom panels were made up by Billy Murdock's Upholstery shop, Brevard, NC, incorporating the MG logo on the doors, with the addition of the slogan "V8 Power" on the rear bulkhead. Carpeting was provided by Moss motors. Air conditioning is a Hot Rod Air unit, with fold-flat Acura eyeballs behind removable original console speaker grill.



The MG logo on the door is a nice touch!

Body: Visually, the body is stock, but modifications have been made to the floor crossmembers and to the bulkhead. The firewall and the front valance are from a '77. A full body restoration was done by Gary Nye, of Nye performance, Brevard, NC. Gary is an artist with metal. A great blocking job. Very straight. Paint is XKE Series 3 BRG, 3 coats of acrylic enamel over multiple primer coats. Hood and trunk struts are



V8 power! another nice touch!

from Ian Pender, although the lightweight aluminum hood only requires a 100 # strut.

Electrical: The alternator is an 80 amp unit, and the starter is a mini, both from D&D Fabrications. Wiring was replaced with a Painless Wiring system. Gauges are stock. Windshield wiper was replaced with a 2-speed Mark II unit.

Frame: The “frame” is strengthened by the addition of an extra transverse U-Channel bracing at rear bulkhead and A Post, and extra longitudinal U-Channel bracing forward of rear bulkhead



A nice set of wheels, and they let the Wilwood brakes show!

Conversion Performed by: Gary Nye of Nye Performance, Brevard, NC

Estimated Cost: Quit Counting

Date Conversion Completed: 5/1/03

Miles Driven Since Conversion: 500

Performance Data: Don't know, except glass springs delaminated going into 2nd. Ted's work with a 3.55 rear and posi, along with the tires and a stiff body makes for a good hook-up.

Problems Encountered Since Completion: Face beginning to hurt from constant grinning. Original 9amp fan wasn't adequate.

Source of Parts/Conversion Information: Newsletter, V-8 Newslist, BBS, Friends, essential a/c help from Jim Stuart, Dan



“Lateral” engine steady bar

at D&D Fabrications, Ted at Fast Cars, Inc, Billy at Murdock's Upholstery, Gary Nye at Nye Performance.

Conversion Advice: Don't wait, just do it. Should have done it 20 years ago.



“Rotational” engine steady bar



Engine mounts “under construction”

Things I would do different on the next conversion: Install traction bars before rear spring delaminated. Install a stronger shrouded fan to begin with. Seal windshield before Tennessee monsoon hit!

Additional Comments: The inspiration for this car came from Pat Dempsey when he parked his car in the car corral at the 2000 Rolex 24 hours in Daytona. Amongst the Cobras and Ferraris was the perfect car- an MGB with American muscle. After talking with Pat, my little brain wheels started turning. The following Fall we went to the Cleveland V8 Meet and we were hooked. There was no turning back. Every car and owner there gave us ideas. We then studied the back issues of the Newsletter and found a solid(ish) car to develop. A friend called with a \$150 parts car (What a deal, honey!) and we went into the shop. Conversion of an early car would be a tough (!*?#) job without professional help on the firewall exchange. The guys taught me how to work on all parts that I couldn't permanently ruin, but I was continually in awe of folks who know what they are doing. The car with an aluminum hood was a challenge, but the clean lines and steel dash of older cars was desired. And yes, I love those pull-handles. We recommend getting ideas from street rodders for wiring tricks and interior designs. The interior work on the seats, dash and panels is very rewarding, as we don't usually actually sit in the engine bay. Lastly, I added a roll bar and

bought more life insurance. All the folks we worked with were great- they all helped create ideas, rather than just selling time and materials.



Trans tunnel mods. Note the AC ducts in the dash support



Completed engine mount and brackets for the steady bars



Wiring to the rear is routed through this conduit! Neat idea!



Additional U-channel frame stiffeners



Motor mount, outlet for hidden wiring, and fuel line outlet



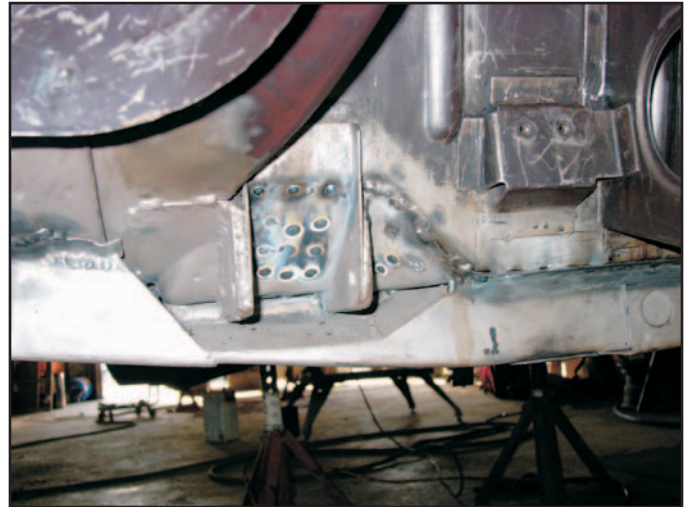
Firewall modification - engine bay side



Corner bracing and newly installed floor



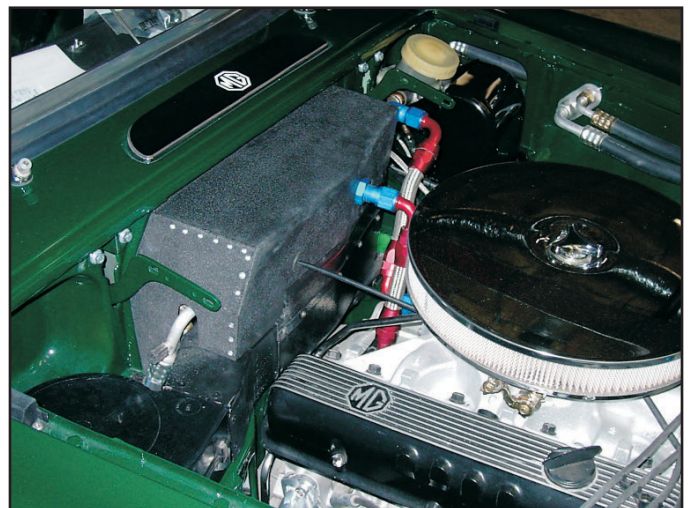
Firewall modification, footwell side



Reinforced spring bracket



Completed firewall mods, including cutout for A/C unit



Finished A/C installation - Super clean setup!

BRITISH V8 2003

By Pete and Sue Mantell

(The theme of this year's British V8 convention was "drive 'em the way they were meant to be driven." And just how were they meant to be driven? I can't think of a better way to enjoy a British Sports car than driving on a sunny day, top down, picnic basket in the trunk, your "special friend" in the passenger seat, on a scenic and winding mountain road, in the company of several other enthusiasts in their British Sports cars. Which is exactly the kind of weekend we planned for the seventh annual British V8 convention, held in the scenic Smoky Mountain area of East Tennessee. Were we successful? Pete Mantell and his wife and special friend Sue were there, let's see what they have to say.)

Wow - what a great event and fun time everyone had at the British V8 Convention 2003, which ran May 1st, 2nd, & 3rd in Townsend Tennessee.

Our V8 MGB, unfortunately, was still not quite roadworthy so we had to take "Lucky Lady," Our Brooklands green 1978 MGB. We left Sidney, IL Wednesday morning, April 30th and planned to travel in convoy with Rick & Jean Ingram (69 MGC), who live 5 miles north in St Joseph, IL. But, just as we were leaving - *trouble!* I noticed a couple of drips of brake fluid from the rear passenger side wheel cylinder!

On closer inspection and a quick phone call to Rick, we decided to take a spare and check the pressure and fluid level "en-route." We drove through Indianapolis, Louisville (where we stopped at Hooters for lunch), Lexington, Knoxville and finally Townsend. The brakes held out until about 15 miles from our destination when I could feel the pedal starting to feel "soft." So, taking the last couple of roads "gingerly," we made it into Townsend and made a "pit stop" at the convention motel.

The Highland Manor Inn is nicely located in a wonderfully picturesque valley in the foothills of the Smoky Mountains with a splendid view of the mountains. Once we were checked in and settled, I decided to tackle the brakes and have a mini tech



This is the view from the balcony of our room at the host motel - made waking up in the morning a real pleasure! ❧

session! Everything was going well until I snapped the brake pipe which had seized in the leaking wheel cylinder! Looks like a trip to the local Auto Parts Store was in order. Ken Biermann

from St Louis was kind enough to give me a ride to the store just before they closed for the day. I picked up various pieces of brake pipe and connections to try and fix the problem.



While everyone else was tooling up to Newfound gap to enjoy the view, and stopping off at Metcalf Bottoms on the way back for a picnic lunch, here am I working on my car! ❧

Thursday May 1st

Dan Masters did a great job of offering different activities everyday, one option this morning and 3 this afternoon. While all the V8 and V6 powered (and stock!) cars rocketed off to Newfound Gap and a riverside picnic lunch, we stayed to fix our brakes. Rick Ingram stayed behind also to offer his expertise (I have found this to be typical of LBC owners, and especially so of the V8 enthusiasts). One more trip to Napa and 2 hours later, Lucky Lady was ready for the road.

For the afternoon we chose to caravan with 8 other cars to Sweetwater and sail the Lost Sea. The roads on the way to Sweetwater were incredible and sights amazing. Part of the route involved driving along the Foothills Parkway, the views reminding me of driving through the Yorkshire Dales in England. The Lost Sea is the largest underground lake in the USA, located deep under ground in a cave, where the



Is this road just made for Sports cars or what? Typical of the many roads we were on this weekend, this one is the Foothills Parkway, up and down over 1000' in 17 miles. ❧

temperature is 58° all year round. After about a 40 minute tour of the caverns, you end up at the lake, where you take a boat ride around the lake on glass bottom boats. The caverns are filled with many crystalline structures, some of which are extremely rare and only exist in these caves.

For dinner, we ate at Deadbeat Pete's in Townsend for some local cuisine! Then on to the social hour back at the Highland Manor Inn for some well earned beverages and tall stories.

Friday May 2nd

The day of the "Dragon." For those of you who have not heard about the "Tail of the Dragon," here is a quick overview:

318 curves in 11 miles!

That says it all! The Dragon is a stretch of highway - US Route 129 - between Maryville, TN and Robbinsville, NC. There is a website dedicated to this twisty piece of highway if you'd like to know more: www.tailofthedragon.com. We had about 12 other cars join us to tackle the Dragon this morning. The route involved going along the wonderful Foothills Parkway again. With its long sweeping curves and inclines up and down the foothills, this road warned us up for the mighty Dragon ahead.

Wow! "The Tail of the Dragon" is awesome/fun/amazing! If you enjoy driving your British sports car the way they were supposed to be driven, then this road is the ultimate test of man and machine!



After conquering "The Dragon" we paused a moment to catch our breath and swap stories of our run up this wildly exciting stretch of motoring Nirvana!

ni

Once again Dan surpassed himself, as we had many options for the afternoon, plus we also had Vendor displays and Tech Sessions. We opted to stay at the motel and look at some of the V8 and V6 conversions, plus I was assisting Dan in the MGB/TR6 Ford 302 V8 conversion tech session. That night we were treated to a barbecue dinner and a Bluegrass concert at the motel. Good food, good music with great company.

Saturday May 3rd

While most of the others made the drive across the Foothills Parkway to the "Top-Of-The-World" for coffee and doughnuts, We decided today to head into Pigeon Forge for a hearty breakfast and have a look around at this very famous tourist town, home of Dolly Parton's Dollywood. Today was also the British Car Gathering at the Best Western next door to the Highland Manor Inn, so after Pigeon Forge we headed back to have a look at the car show.

Saturday afternoon was an informal "Show and Tell" by

some conversion owners, giving us a tour of their cars - what was done, why it was done, how it was done etc.



Dan Masters' Ford 302 tech session was so boring, he put himself to sleep! Actually, he was heavily medicated just to be able to be here, following his 20ft fall off a ladder!

jn

For dinner, Dan had arranged for a banquet at The Park Grill in Gatlinburg via the Little River Road. What a wonderful way to end a convention. Another picturesque road snaking through the beautiful Smokys with great food waiting for us at the other end!



Just to prove we were there! The entrance to the Great Smoky Mountain National park, and we were there! Rick and Jean Ingram in the red, Pete and Sue Mantell in the green.

ni

Sunday May 4th

Back to reality! The day to head home to vertically challenged Central Illinois (at the souvenir shop at the end of The Dragon, they have a t-shirt that reads: "The Dragon - 318 curves in 11 miles. Illinois - 11 curves in 318 miles")! The 2003 British V8 Conversion Convention was excellent - a big thanks to Dan Masters and everyone who made this event possible. The relaxed atmosphere and camaraderie at these events make these conventions totally enjoyable and unique. Can't wait for the next two V8 conversion convention events: Grand Rapids MI 2004 and Terre Haute IN 2005 (see page 6 for more info on these events - *dm*)

V3



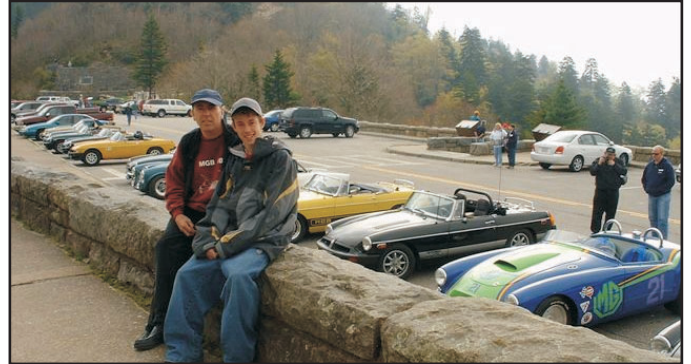
Lined up, ready to go. An early morning tour in the making - MGBs, Austin-Healeys, Triumph TR6s, TR3s, Spitfires, Sunbeam Tigers, TVRs - no discrimination here! *ks*



Turn left. Turn right. Repeat. Little river Road, on the way to Newfound Gap *ri*



This is the view that awaited those who made the newfound Gap run on Thursday morning (while we were working on our brakes!) *jr*



Martyn Harvey and his son Graeme drove all the way from Canada to be here in Martyn's MGBV8 - what a father-son outing that must have been! *mh*



One way to cut the cost of gas - steal it from your friends! There are no gas stations in the Smokys - if you need gas, you need friends! *ks*



A veritable "British Invasion" at Newfound Gap. It was springtime in Townsend, but it was still winter up here. *jr*



Sue Hunter, Kurt Schley, Christa & Dan Masters hand out the picnic goodies at the Little River picnic grounds *jr*



"The Dragon" - It's like this for eleven miles, ideal for British Sports cars, especially those with V8s! *jm*



168 doughnuts, 48 bagels, 4 lbs of cream cheese, and 84 cups of coffee awaited those who made the Saturday morning breakfast run to the "Top of the World" *jr*



Good coffee, good doughnuts, good friends, a good view, and a good drive to get here - what more could you ask for? Almost wish we had gone here instead of Pigeon Forge *jr*



Ted Lathrop's tech session on his new MGB crossmember/front suspension *jr*



Dan Lagrou's flywheel tech session - with supervision by Kurt Schley! *jr*



Jim Miller gave a much appreciated tech session on cruise controls *jr*



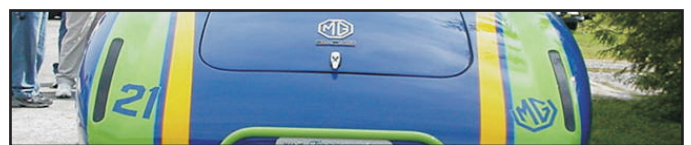
Jack swears this is the only comfortable way to work *jm*



Just your average "rice-burner" NOT! Jim Blackwood's highly modified MGBV8. *jr*



Some of us just couldn't get enough of "hot rods." For them there was a trip to the Street Rod show in Knoxville. Over 3500 Street Rods were in attendance *jr*



THE END! Until next year, that is. See you in Michigan or California? *jr*

IS THERE A FORD IN YOUR FUTURE?

By Dan Masters

In the early 60s, a chicken farmer from Texas imported a small, lightweight sports car from England, stuffed an American V8 into it, and went out and kicked butt on racing circuits all over the world. In 1965, this unlikely combination won the World's GT Championship, beating no less than the prancing red horses of Signor Ferrari. The chicken farmer was Carroll Shelby, the Car was an AC Ace, and the engine was an all iron Ford small block.



Photo 1: Go to your Ford dealer, ask for part # M-6007-XB3, write a check for \$3,195 plus tax, and this is what you'll get. Rated by Ford at 345HP, this engine has been dynoed at 375HP by two car magazines. Shop around, and you can get it for less.

At the time, the BOP all aluminum engine was available, but Shelby chose the Ford, even though it weighed about 130 pounds more. Why did Shelby choose the Ford instead of the lighter BOP engine? Only Shelby knows for sure, but my best guess is, other than political/financial reasons, it had a lot to do with the 260CI Ford displacement vs the 215CI BOP displacement. It is rumored that Colin Chapman once said that "light weight is next to Godliness." Perhaps, and I sure can't argue with that, but Shelby proved that power *is* Godliness! As any old hot-rodder will tell you: "there is no replacement for displacement." I certainly won't dare to suggest that the extra 45 cubic inches was the sole reason, or even a primary reason, that Shelby chose the Ford, but I will tell you that the extra 87 cubic inches available in the modern 302CI incarnation of Shelby's choice is a prime factor in my selecting this engine for my own version of a "Cobra."

That's not to suggest that the BOP (or the BOP/Rover as available now) isn't a good choice for any of our small British sports cars. If you own a late model rubber bumper MGB, from about '77 on, the ease of installation of the BOP/Rover makes it a very attractive choice. As with anything, there are pros and cons associated with any engine choice you might make, and the options are almost unlimited. Chevy 350, Buick 231 V6, GM 60° V6, - these are just a few of the more common options available, not to mention some of the more exotic engines, such as the Mercedes-Benz all aluminum V8s or V6s, the Toyota "mini-hemi" V8, or any of the modern crop of high tech, light weight engines that are just now making their way in to the boneyards in significant numbers. In the next issue of the Newsletter, I plan to

discuss some of the available and suitable V6 engine choices, but for this article, I will stick to my personal favorite, the Ford 302!

Physical parameters: The Ford 302 is slightly smaller externally than the BOP/Rover - not enough to provide a significant advantage, but enough so that if there's room for the BOP/Rover, there will be enough room for the Ford. A complete 302, with aluminum heads, intake, water pump, a light weight starter and a 27 pound flywheel will weigh about 435 pounds. A T5 transmission and bellhousing will weigh about 85 pounds, for a total weight of about 520 pounds. This is only 25 pounds more than an MGB engine with an OD transmission, and about 55 pounds *less* than a TR6 with an OD transmission. Twenty five extra pounds on the front of an MGB are not going to significantly alter the handling characteristics of the car. Losing 55 pounds on a TR6 will improve the handling, but not significantly. On the other hand, a BOP/Rover with a T5 will only weigh about 440 pounds.

At this point, we might pause a moment to review some simple rules:

1. All else being equal, lighter is better.
2. All else being equal, 50/50 weight distribution is better.
3. All else being equal, more power is better.
4. All else being equal, low cost is better.
5. All else being equal, ease of installation is better.
6. All else is seldom equal.

Consider rule # 1. An MGB with a BOP/Rover V8 weighs approximately 2500 pounds. With a 200HP engine, that's 12.5 pounds per horsepower. Switching to a Ford 302 will add 80 pounds. To maintain the same weight to power ratio, the Ford will need to have 206HP. In a straight line, a 206HP Ford powered MGB will perform exactly the same as the 200HP BOP/Rover powered MGB. What about corners? With only 206HP, the Ford engined car will be at a slight disadvantage, but the difference will only be apparent at or near the limits of the car's adhesion. Eighty pounds on a 2500 pound car is only 3%. On the other hand (considering rule #6), a 2500 pound, 200HP MGB will be left in the dust by a 2580 pound, 300HP MGB. In other words, with an extra 100HP to play with, all else is *not* equal!

Consider rule #2. *If* a 2500 pound MGB with a BOP/Rover has a 50/50 weight distribution, adding the extra 80 pounds of the Ford will change the weight to 2580, and the distribution ratio to 51.5/48.5 (actually, it won't be that bad, because not all of the weight will be over the front wheels). I challenge you to find a high performance, production front engine rear wheel drive sports car with a weight distribution much closer to 50/50 than that! The Cobra certainly didn't have it. Ferraris didn't. Corvettes don't. There may have been a few makes that did, but only a few. While desirable, 50/50 isn't the holy grail of performance. Again, a 200HP 50/50 MGB will be left in the dust by a 300HP 51.5/48.5 MGB. All else being equal, that is.

Consider rules # 3 & 4. How much power do you need? Excuse me, I should say how much power do you want? I have driven MGs and Triumphs with 350 to 375 HP, and I like that a lot better than 200 - 250. While even as little as 150 is an improvement over stock, more power is preferred as long as the engine is still manageable and drivable, at least in my humble opinion. How much does 300HP cost? On a BOP/Rover? On a 302 Ford? We'll discuss costs later.

Consider rule #5. For some of us, ease of installation is of prime importance. Not all of us have the time, tools, or talent to tackle a difficult engine swap. Some of us, however, do have the time, tools, and talent to tackle even the most complicated engine swap. Yet others have the necessary money to pay those that have the time, tools, and talent to do the job for them. On average, though, ease of installation is a significant factor in selecting an engine for a swap. We'll discuss this later also.

Consider rule #6. All else is very seldom, if ever, equal. Add a few pounds to the front end, and you may find that the heavier axle required to handle the higher power may just put the car back closer to the ideal 50/50 weight distribution. Or, the heavier engine just might have enough extra power to more than offset any added weight. If you want more power, the cost isn't going to stay the same. Bottom line is - you have to consider all factors before making a decision. Now back to Ford information!

History: The Ford 302 began life in 1961 as a 221CI engine for use in the staid family sedan, the Fairlane. It was almost immediately bumped up to 260CI, and this was the original engine used by Shelby for the Cobra. The 289 followed soon, and in 1968, the 302 was introduced. This engine family was one of, if not the, first to use the new "thin-wall" casting techniques. This casting technique greatly reduced the possibility of core shift during the pouring of the molten metal to make the engine. This, in turn, greatly reduced the requirements for extra thick walls in the engine which had been required to allow for machining without breakthrough due to core shift. Reducing the wall thickness greatly reduced the weight. Improvements in metallurgy also allowed the engineers to design the block such that it ended at the center line of the crank, rather than extending below it as was the case in most other engines. This also contributed to the reduction in weight.

Many other changes and improvements have been made over the years, but the engine has stayed basically the same through all the changes. Parts from one engine will usually fit about any other engine, perhaps with a little machining. Some of the changes haven't been significant enough to merit discussion, while others have been. The more significant changes are:

- ▶1984: Throttle body fuel injection was available
- ▶1986: The cam was changed to a hydraulic roller cam
- ▶1988: Individual port injection EFI with Speed-density air intake sensing was introduced
- ▶1989: Speed-density air flow sensing was replaced with Mass-air sensing.

Not all of the above changes applied to all Ford models.

Things you need to know: In 1965, Ford changed the bell housing pattern from a 5-bolt to the current 6-bolt. Unless you also want to use an early transmission, stay away from pre-65 engines.

In 1980, Ford changed the external balance weights on the flywheel from 28.2 Oz-in to 50.0 oz-in. If you are putting together an engine from parts, make sure you use the proper crank damper and flywheel for your particular engine. If not, SEVERE vibration will result.

The engine mounting bolt holes on the passenger side are set back by 7/8" from the holes on the driver's side (it is believed that all 289 - 302 engines have the same offset, but you should measure to be sure). You have three choices when it comes to making motor mounts: you can make the mounts the same and

offset the chassis mounting position, you can make each mount different and not offset the chassis mounting points, or you can design the mounts so that they are the same for each side and still use the same chassis mounting points. See **Figure 1** for details on the third option.

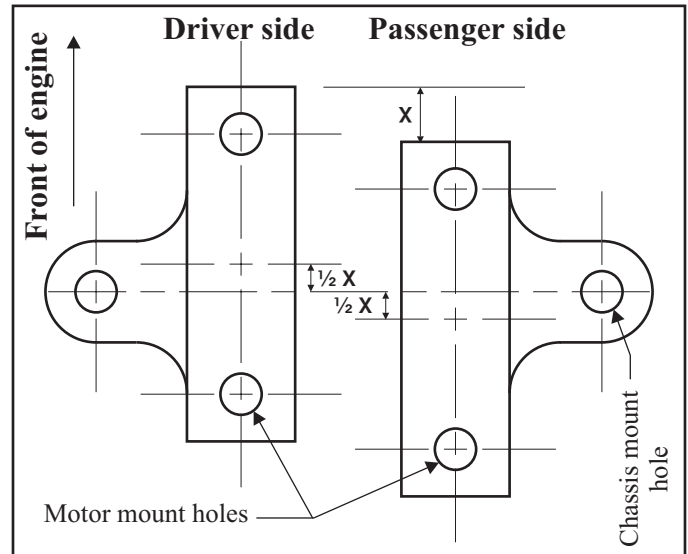


Figure 1: "Generic" motor mounts. If you offset the chassis mount position from the centerline between the engine mount holes by one-half the distance "X," where X is the offset from one side of the engine to the other, identical mounts can be made for both sides of the engine, yet the chassis mounts will be symmetrical on both sides of the chassis.

Ford numbers the cylinders using a different pattern than GM. As a result, the firing order is different. However, if you should, out of habit, number the cylinders as per GM, you can use the GM firing order instead of the Ford, and all will be well. In other words, the pistons fire in the same order for both brands - only the numbering is different. See **Figure 2** for details. On the other hand, the later Ford 302 HO engines use the same firing order as the 351: 1-3-7-2-6-5-4. Check your engine to be sure!

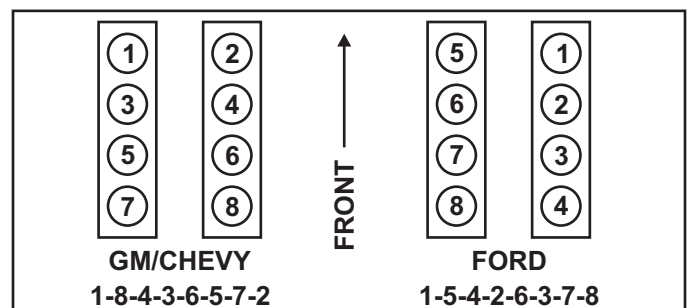


Figure 2: Ford vs Chevy firing order

If you are using a late model engine, with a roller cam, it is imperative that you use the proper drive gear on the distributor. You must either use a bronze or a special steel distributor drive gear, or the drive gear and the cam gear will be chewed up in a very short time.

Serpentine vs V-belt: The water pump for a serpentine belt drive system rotates in the opposite direction as does the water pump for a V-belt installation. Stock and aftermarket pumps are available for both types, but be sure to use the correct type for the

belt drive system you are using. If you just swap out the pulley, the water pump will be extremely inefficient, and overheating may result.

Costs: Costs are extremely variable, depending on the end results desired and how good you are bargaining. If you are active in the automobile hobbyist community where you live, you might be able to pick up a good used engine for under \$200. If you walk in off the street cold, a perfect stranger to the boneyard folks, and have “sucker” written on your forehead, you still should be able to buy a good late model engine, complete, for under \$1500.

Once you’ve purchased the base engine, the cost of the ancillaries needed to complete it are about the same cost as for any engine. Carburetors, alternators, etc, will cost exactly the same. Intake manifolds, starters, etc, will vary a little from make to make, but will still be in the same ball park from engine to engine. If you are looking for used parts, you will find a wide range of availability and cost from depending on the engine you are using. Chevy parts, being that Chevis are the most common engine used in an engine swap, will be the easiest and cheapest to find. The relative rarity of BOP/Rover engine makes finding used parts for them a bit more difficult and costly. With the rapidly growing popularity of the Mustang comes a rapidly expanding availability of aftermarket and used parts, along with a lowering price range as the popularity grows.

What about new parts? Ford Motor Company sells 6 different 302/5.0 crate engines - 4 with aluminum heads and 2 with iron heads - ranging in (Ford) rated HP from 225 to 345. All 4 aluminum head engines retail for \$3,195, while the 2 iron head engines retail for \$2,895 or \$2,995. Let’s assume you’re willing to spring for the extra \$300 and want to buy the highest powered version. Your cost breakdown for a complete engine, using pbrand new parts as shown, would look something like:

▶Long block:	\$3,195
▶Intake manifold, Edelbrock Performer EDL-2121	\$140
▶Carburetor, Edelbrock 600CFM EDL-1405	\$210
▶Air cleaner, Edelbrock EDL 1207	\$25
▶Alternator, GM 7127, rebuilt	\$35
▶Starter, Ford lightweight, hi-torque M-11000-A50	\$160
▶Distributor, Accel ACC-71202E	\$200
▶Clutch, Ford M-7560-A302	\$229
▶Hydraulic TOB, McLoed	Approximately \$250
▶Total	\$4324

Unless you have money to spare, there is no reason to pay the above prices - all of the above parts are available at discount prices if you shop around. In addition to the parts listed above, you’ll need to add exhaust headers, pulleys, and alternator mounting brackets. Currently, there are no commercially available exhaust headers, so you will either have to make your own or have them made. There is at least one conversion shop that I know of that is in the planning stage for producing custom headers for MGB applications, so that will simplify things considerably.

In addition to headers, you will also need to buy or make mounting brackets and pulleys. For the engine I’m using in my TR6, I made my own crank pulley, using a friend’s lathe, and used a water pump pulley from a ‘77 Buick V6 which I just happened to have around. I also made my own alternator

mounting bracket, using scrap pieces of steel, a hacksaw, bench grinder, file, and sandpaper. All totaled, I have about \$10.00 invested in materials, plus about \$30 in the chrome plating of the parts. If you want to go high end, March makes a very nice set of “billet” pulleys that you could use. Prices for these will run from about \$80 to \$200, depending on your set-up and tastes.

Power: Power costs money, how much power do you want? From the boneyard, stock engines are available from 150HP and up. The engine listed above should produce in excess of 350HP. Stroker kits are available to bring the engine displacement up to 347CI, which should enable horsepower output of over 400! These kits typically run around \$1,500 or so.

Naturally, if you want to go wild, more power can be had, but at the expense of drive-ability. One of the Ford type magazines recently had an article on a Ford small block engine build that produced 1000HP!

Drawbacks: As you might expect, there are some problems involved in fitting one of these engines into an MGB or other small British Sports car. The first problem you may encounter is length. At 27.5”, the Ford is a bit longer than either the BOP/Rover or the Chevy small block. I think this is more of a problem in a TR6 than it is in an MGB. In the TR6, the crank pulley butts up against the steering rack, so the front accessories have to be shortened, or the engine has to be set way back in the chassis. This is the primary reason I made my own crank pulley (see **photo 2**). All of the commercially available pulleys were just too thick. Fortunately, the Buick water pump pulley I had laying around was deep enough to match the thin crank pulley I made, or I would have had to custom make that also.



Photo 2: Special “short” pulley required for clearance in a TR6

It may be that the water pump itself causes a fit problem in certain cars. Ford Motorsports sells two shorter water pumps, part no. M-8501-E351S for V-belts, and M-8501-A50 for serpentine belts, which are 1.5” or 1.75” shorter respectively than the stock pump.

Another area of concern is the depth of the oil pan at the front. In the BOP/Rover, the oil pump is angled to one side, and there are passages in the block to carry oil from the rear mounted pick-up to the pump. In the Ford, the pump sticks straight down into the pan, and the pick-up is attached directly to the pump. For this reason, there is little you can do to reduce the overall engine depth by more than just a few inches. Direct from Ford, there are three available oil pan designs: front sump, rear sump, and dual sump.

With the front sump design, the oil pickup tube is located very near the oil pump and in the front of the pan. This design has the largest depth at the front of the pan, and will probably cause problems with most installations. **Photos 1 & 3** show front sump pans. The rear sump pan has the shallowest depth at the front of any pan, but it will still cause problems with many installations, as the pump body is still located at the front of the engine, and still requires a significant depth to clear. The third choice is the dual sump, as shown in **Photo 4**. In this sump, the pickup is located in the rear, same as for the rear sump, but the pan has a “notch” built into it, which may help to clear some suspension systems, depending on the particular installation.

One of the draw backs of the dual sump is the fact that there

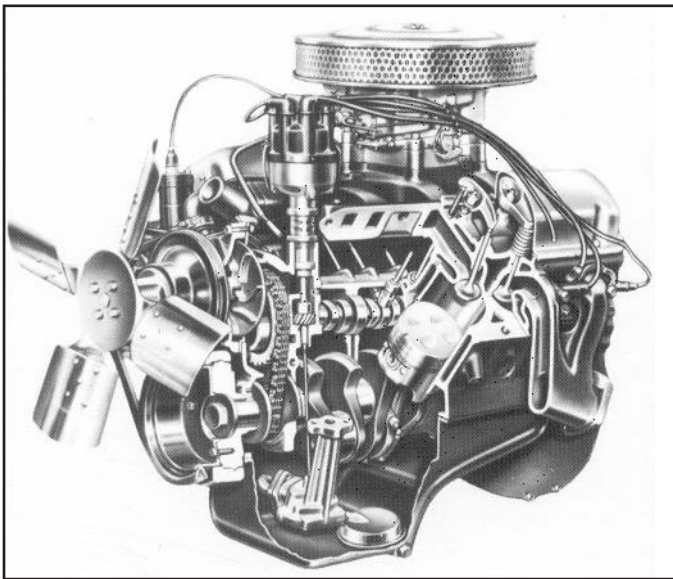


Photo 2: Ford engine cut-away, showing oil pump details. Even if the oil pick-up is moved to the rear of the pan, the pump itself still requires a fairly deep pan in front.

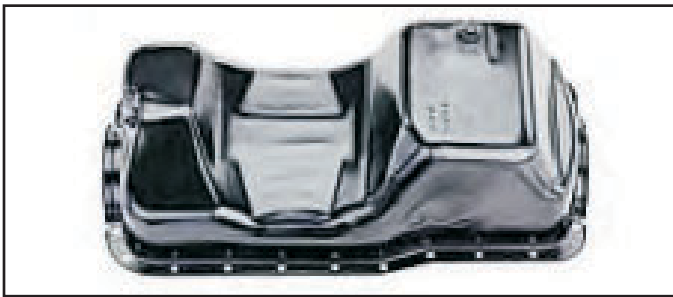


Photo 3: Dual sump oil pan

are two drain plugs involved - one in the front sump and one in the rear. This may or may not be a factor in any given installation, but it created a problem in my TR6 swap. The front plug was located directly above the front cross-member, which would mean that I would have oil dripping off the cross-member onto the floor every time I changed the oil. Not a serious problem, but it's the little things like this that can make the difference between a fun to own swap and a pain in the butt!

To get around that problem, and to save a little money, I made my own "rear sump" pan from the dual sump pan I got with the junkyard engine I used for mock-up purposes. To do this, I cut the center out of the pan, made a filler panel out of scrap sheet



Photo 5: A little cleanup, a little paint, and Voila! a rear sump oil pan on the cheap.

metal, and had the filler piece welded in place of the piece I cut out. I also had the front drain plug hole welded up, as it would no longer be needed now that the oil from the front sump has a drain path back to the rear sump. I also gained a lot of added oil capacity as well. See **photo 5** for details.

As stated earlier, exhaust headers will be another source of problems, as there are no ready-made headers currently available. None of the available headers will fit without extensive modifications, which run the cost of the conversion up quite a bit if you have to hire the work done.

Clutch actuation may be another problem area, but it's easily solved. From the factory, Ford cars use a cable mechanism to operate the clutch. Duplicating this setup in an MGB or a TR6, for example, can be a bit difficult. Firstly, there is precious little room around the bellhousing to accommodate the cable mechanism. Secondly, it may require quite a bit of creativity to modify the clutch pedal assembly to convert it from hydraulic to mechanical operation. It can be - and has been - done, but it's a bit tricky to do and make it look right. Luckily, there are the old

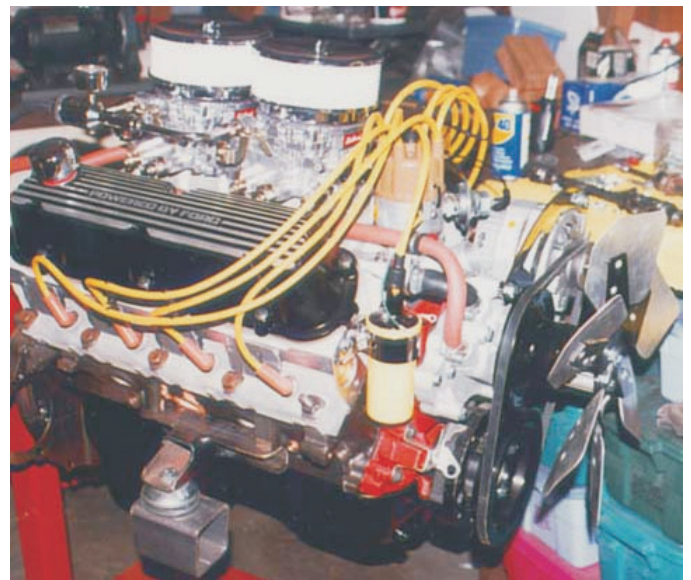


Photo 6: My own 302 Ford, right side view

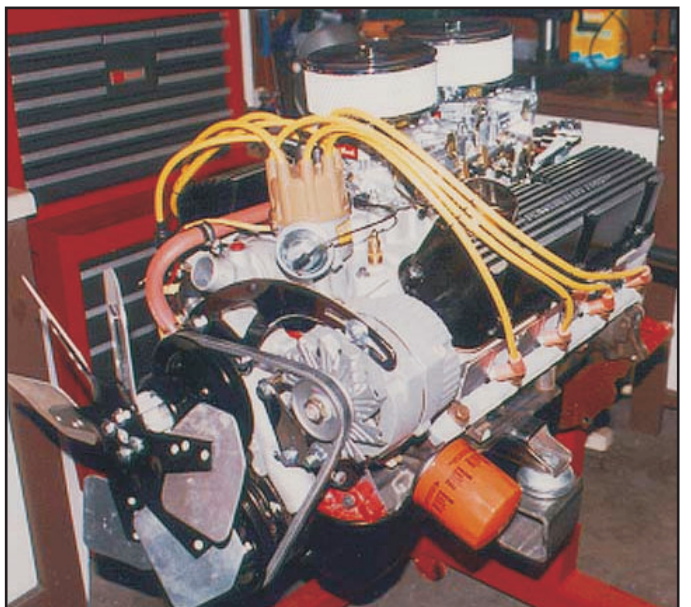


Photo 7: My own 302 Ford, left side view

standbys, the hydraulic throw-out bearing that are most often used with BOP/Rover engines.

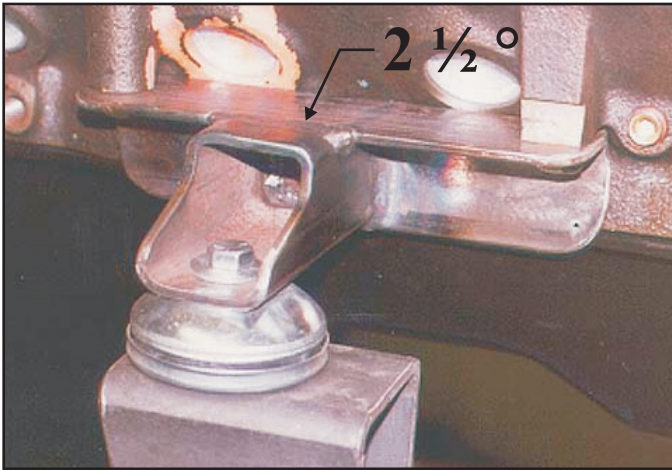


Photo 8: Custom "one-off" motor mount. Note that the tube steel piece is welded at a 2 1/2 degree angle with respect to the angle steel. This lets the motor sit at the proper angle for drive train phasing, with the carburetor flange level to the ground.

As you can see in **Photo 7**, the oil filter sticks almost straight out from the left side of the engine. In an MGB, this oil filter will almost certainly create problems. An easy solution is to use a remote oil filter mount, the same as used often in a BOP/Rover installation. In my TR6, I could leave the oil filter where it is and change it by turning the wheels hard right and reaching in behind the left front wheel to reach it. As easy as this is, I still prefer to use a remote filter mount. This also gives me a good place to put the electric oil pressure sender without giving up the stock oil pressure switch.

Installation: For the most part, a 302 entails about the same work as a 215 BOP/Rover. Most of the differences have already been covered, but there are a few other things to be aware of:

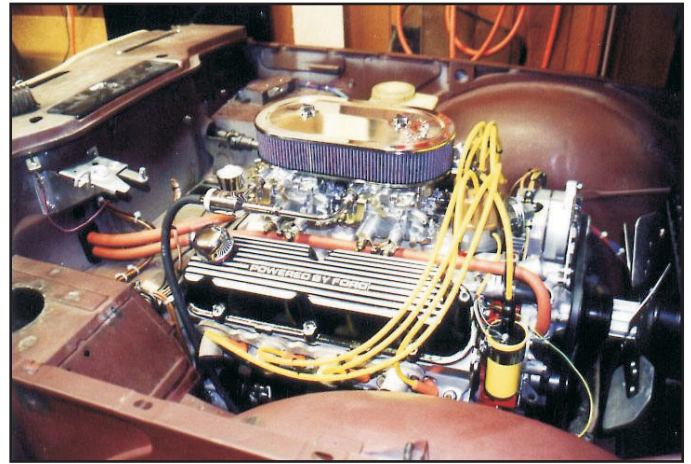
- The bolt holes for the motor mounts install vertically in the 302, as opposed to horizontally as in the BOP/Rover. This may be an advantage or a disadvantage, depending on your application. On a TR6, it's a definite plus (see **Photo 8**).

- The alternator on a Ford engine is usually mounted on the passenger side. The driver's side head is offset a bit to the rear compared to the passenger side, so by mounting the alternator on the driver's side, a little more space can be gained at the front of the engine (if the appropriate pulleys are used, as I did).

- The distance from the back of the engine to the gear shift lever on a Ford 302/Ford T5 is 26.5", about the same as the 27" on a BOP/Rover/GMT5. (the Ford bellhousing is 7", the GM 6")

- The Ford T5 mounts to the engine at a slight angle, just a few degrees, but the mounting pad is offset so that it remains level when the transmission/engine is installed. Compare this to the 18° tilt of the GM T5, and the modification that is required to fit it into a British sports car.

Summary: For many British car applications, the Ford 302 is hard to beat. That's not to say that the venerable BOP/Rover engine isn't an excellent choice also. Given the information in this article and the depth of knowledge available for the BOP/Rover, you should be able to make a clear choice for your application. Following are some photos of various Triumph and MGB cars with the 302, to give you a better idea of how it fits. **13**



Dan Masters' soon to be Ford powered TR6



Pete Mantell's Ford powered MGB



Steve Tayler's Ford powered MGBGT



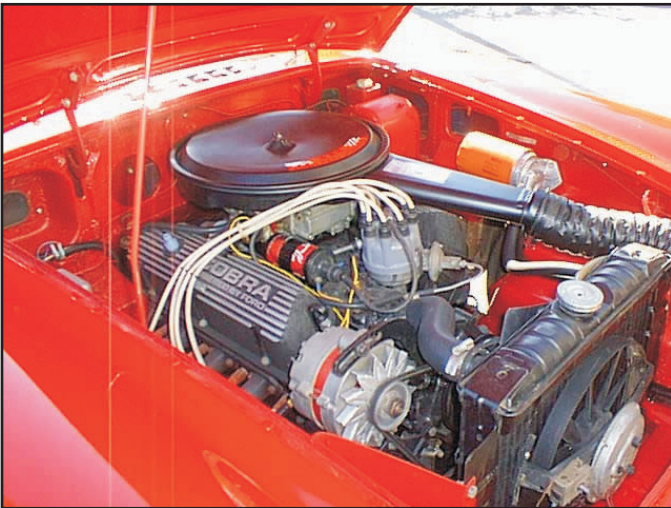
Dale Martin's Ford powered TR6



Jay Smith's Ford powered TR4



John Butrace's Ford powered TR6



Dan Graves' Ford powered MGB



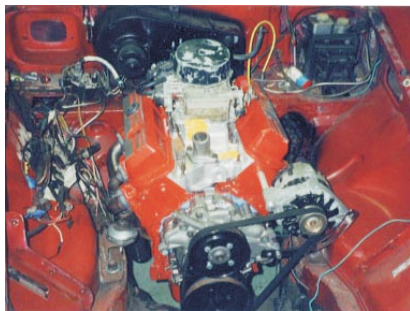
Mark Kovalsky's Ford powered TR6



Steve Carrick's Ford powered MGB



Carl Halcomb's Ford powered MGB



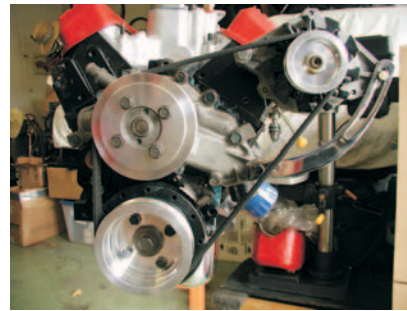
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