BRITISH V8 NEWSLETTER

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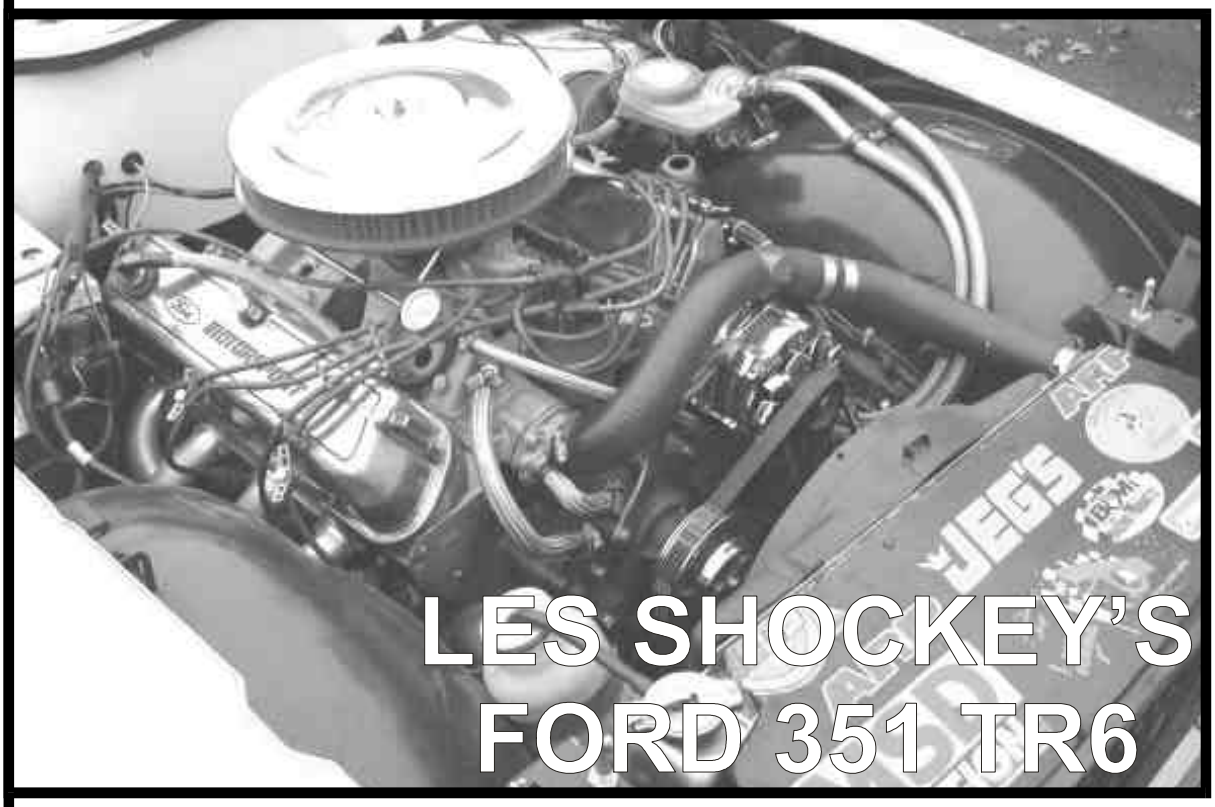

LES SHOCKEY'S FORD 351 TR6

FEATURED STORIES:

- LES SHOCKEY'S TR6/FORD 351
- ROBERT FRANZEN'S MGB/BUICK 215
- RECIPE FOR A "STROKER" V8
- PORTING THE BUICK 300 HEAD
- FUEL SENDER MODIFICATIONS
- BUILD IT, AND THEY WILL COME

ADDRESS LABEL

WANTED!

Any British V8 or V6 related articles, tech tips, photos, product or vendor recommendations.

"How it was done" articles - share your expertise with us!

Comments, opinions, or corrections to Newsletter articles.

This is YOUR newsletter - how successful it remains depends on YOU - SEND THOSE ARTICLES IN!

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BRITISH V8 WEB SITES

www.groups.yahoo.com/group/rover-v8 - A Yahoo message group dedicated to the Rover V8.

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FROM THE EDITOR

This is not the editorial I wanted to write. If you are reading this, then you are probably aware of the problems the newsletter has been having, and the steps that have been taken to resolve them. In case you aren't, I'll briefly outline them here.

Firstly, a brief description of how the newsletter staff has been organized since Kurt Schley turned over the reins to the new staff. Don Rausch has been acting as the publisher, which meant he controlled the business aspects, such as maintaining the subscriber list, collecting subscription fees, handling the advertising account - basically, anything having to do with money. Also, he has had the responsibility for getting the newsletter printed and in the mail to the readers.

My responsibility, as the editor, consisted of gathering up the material for articles, formatting the newsletter, and getting a reproducible master copy to Don for mass reproduction.

After the first issue, I was not happy with the timeliness or quality of the newsletter, so I contacted Don to discuss making some changes. It was decided that I would print and distribute the newsletter from here, rather than sending the master copy to Florida. To do this, I purchased a Hewlett-Packard model 8150 printer, one that will make high quality prints on 11"x17" paper. Each newsletter would then be an original, not a "Xerox." In addition, Don was to provide me with the mailing list so I could get the newsletters out to subscribers.

As you know, it hasn't worked out that way. As of this date, I haven't received the mailing list, so I am not able to get the newsletter out to those who have sent in their money and subscribed to the newsletter. The best compromise I can work out in the interim is to publish the newsletter electronically over the Internet. An informal survey of subscribers on the MGBV8 Internet mailing list indicated that most readers would be happy to receive the newsletter in this format. Therefore, beginning with this issue, the newsletter will be published in both hard copy and electronic format.

What to do about those who are not connected to the Internet, or who simply prefer hard copy? Without knowing who they are - and I can't know without the mailing list - there isn't a lot I can do. All I can do wait until a disgruntled subscriber contacts me to gripe, and deal with them on a one-to-one basis. I would ask you then to contact as many people as you know who may not be aware of the problem and let them know. I have revised the British V8 web site to explain the changes, so maybe that will get the word out to many, through their online friends. Just as soon as I can identify a subscriber, I will get a hard copy to them if that's their preference. By printing the newsletter myself, I can make copies in an "on-demand" basis. This also means that back issues will always be available, as I will keep the computer files on hand indefinitely.

Now, on to better topics. The first issue of the newly named British V8 newsletter is history. There have been no mutinies, no lynchings, no Triumphs burned in effigy, so I suppose the name and scope change is OK with the readers. Given that the scope change must be OK, what about the quality and content of the first issue under the new editorship? The response to the last issue could best be described as a "thundering silence!" I've heard no comments at all, pro or con. That ain't no way to run a railroad, folks. I need feedback. Let me know what you like, and what you don't like. Otherwise, you get what I like (I tend to like electrical stuff, but we wouldn't want to see this newsletter turn into *The British Wiring Newsletter*.

More important, let me know what you would like to see covered in future issues. You having a problem with your conversion? Let me know, maybe I can find someone who's been there, done that, and will share their knowledge with us. Having a problem selecting a cam? Understanding cam specs? Let me know, and I'll do my best to get the info for you.

Even more important yet, how about sharing your knowledge and experience with the rest of us? You don't have to be a writer to submit articles for publication. Just send the info in as best you can, and I'll convert it into a reasonable facsimile of a magazine article for you. Pictures help. Pictures help a LOT! A picture is worth a thousand words, right? Pictures take up about the same space as a hundred words, so that's a real deal - ten for the price of one! If you have a digital camera, and can send the photos to me electronically, that's fine, but I can convert traditional film prints for you, and return your pictures to you unharmed.

I am committed to keeping the newsletter alive, and with your help, we can. Thank you for your patience and understanding, and s***end those article in!*** dm

MISCELLANEOUS

- From Brian Yeats: The Nov 2000 edition of **Rod and Custom** lists engine to transmission adapter manufacturers and shows that Kennedy Engineered Parts , Dept rc11, 38830 17 st south, Palmdale, CA 93550, phone 805-272-1147, as a supplier for adapters to mate almost any GM automatic to the 215 aluminum V-8, including the new 700r4 4 speed auto. Personally, I like the six speed I have in my GT, but if you want a slush-box other than the factory original 2 speed, here's some better options.

- We're famous! Check out the October, 2001 issue of **Car Craft** magazine, page 14. The reader's website of the month is none other than our very own British V8 Newsletter website!

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e-mail mgbv8@iserv.net for further information
or see
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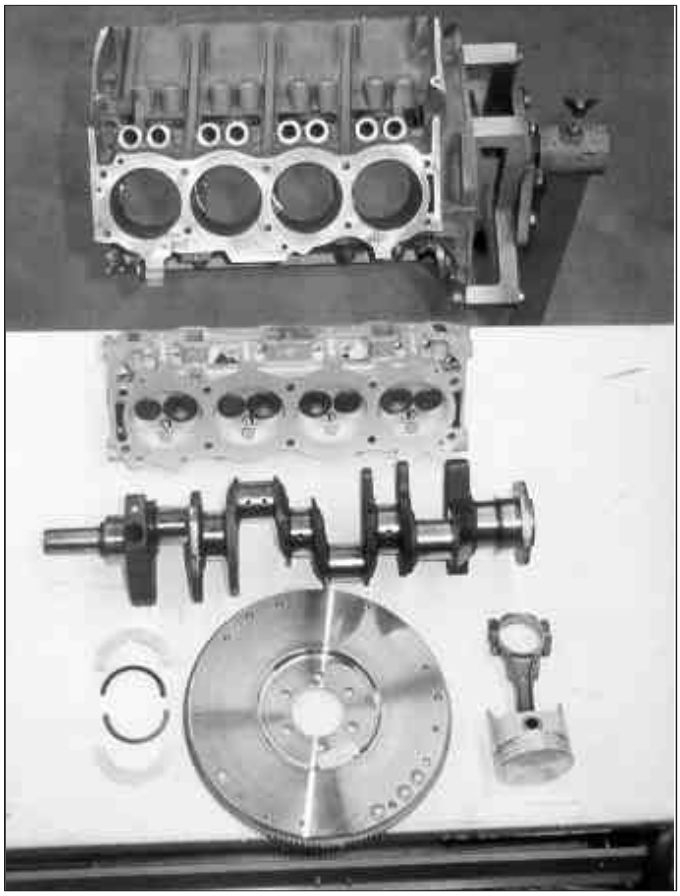
RECIPEFORANAFFORDABLESTROKERV8

By Kurt Schley

Dan Lagrou of D & D Fabrications has been building high performance 215 engines for over 25 years, includingmany dozens of aluminum V8 stroker motors. With the advent in 1994 of a new Rover block with cross-bolted mains and a 3.7" bore, Dan developed a recipe for a 294 inch (4.8L) stroker motor which weighs in dry at a flyweight 340 lbs! The stroker incorporates an esoteric blend of parts from the Buick, Rover, Ford and Chevrolet parts bins, but the combination is well proven and all of the parts are readily available. The primary components are a late Rover block mated to a 1964 - 67 Buick 300 crankshaft and '64Buick300 heads. For stuffing into anMG, Triumph, Healey, or other British iron, the Rover stroker engine cannot be beat.

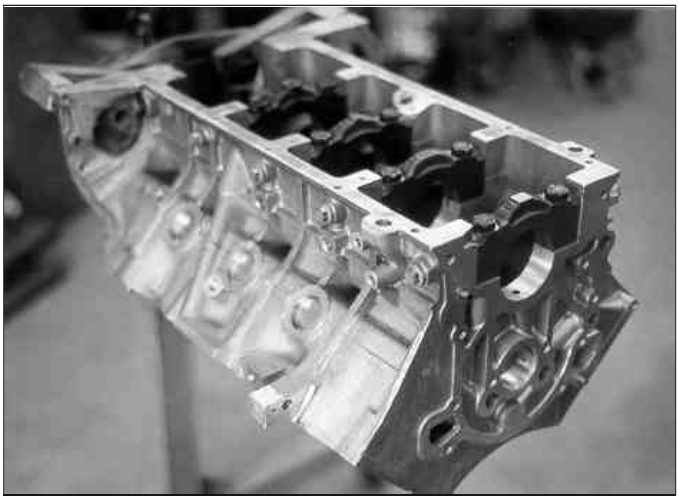
Below are Dan's recommendations for a "basic" stroker which will put out plenty of torque and live a long time.These are listed in the recipe below as "mandatory" items. To go to the nth degree of preparation and gain some longevity under demanding conditions, (and probably a few more horses) several "insurance" options are noted.



Major components of the Rover/BOP stroker engine

ENGINE BLOCK

In 1994 Rover introduced an improved block for use in all Rover V-8 applications, including the Land and Range Rover SUV's. The new block incorporates added reinforcing webbing, but more importantly, it also carries cast-in bosses for 4-bolt main bearing caps: two vertical bolts per earlier production, plus two horizontal bolts securing each cap from the side and effectively tying the whole lower end securely together. The new block casting carries the number HRC2411 on one side. The four bolt bosses are in place, but not drilled for the current 3.9 or a now defunct 4.2L engines, nor are the necessary larger main bearing caps provided. The block we aremostinterested in is for the 4.0L and 4.6L engines. These engines do have 4-bolt mains with the corresponding larger caps. Flexing of the lower end has been completely eliminated and the lower end is now practically bulletproof.



Rover 4.0/4.6 crossbolted main engine block

For some reason, undersize main bearings are not available from Rover or any aftermarket sources for the new aluminum V-8 blocks. Apparently, Rover feels that if a crankshaft requires grinding undersize, it should be replaced outright. If the Buick 300 crankshaft is in good condition and only requires a polish, the stock Rover main bearings can be used. However, if the crankshaft has been ground undersize, Buick 300 undersize bearings are readily available and can be installed in the Rover block. This will require line boring the block's main bearing bores approximately 0.022" to fit the Buick bearing's larger o.d. Lagrou recommends this procedure even with a stock crank journal size in case the crank needs grinding undersize at a later rebuild.

Mandatory Operations:

- Check the cylinder bores for diameter and out-of-round condition. There seems to have been a problem with the cylinders being slightly oval on the 4.0 and 4.6L V-8's. Several rebuilders have reported that they often observe the cylinder not becoming "round" until the boring bar gets out to about +0.007".For this reason, any Rover block should be overbored 0.010" to 3.710", to insure proper cylinder concentricity. Check andmakesurethemachineshopwill be using torque plates when they bore the block. The cylinder bores can distort a few thousands of an inch when the heads are bolted on. It is counterproductive to carefully machine the block, without torque plates, only to have the cylinders distort during engine assembly.
- After all machining, wash the block thoroughly with hot water and soap. Clean all small bores and oil passages with a plastic brush. Dry with compressed air and oil the cylinder bores immediately.

InsuranceOperations:

- Check the block for casting flash and spend a little timewitha

grinder, smoothing off sharp casting lines and removing flash. Just as with a cast-iron block, fatigue fractures in an aluminum version will always initiate on sharp edges. Pay close attention to the lifter valley; any flash which comes off here will go right into the oil. The really fastidious engine builders will actually polish this area to aid oil drainback.

- Chase all the threaded bolt holes with a tap, preferably a bottoming tap, to remove crud, and make sure the threads are in good condition. This will help to insure that torque readings during engine assembly are correct. A bottoming tap can be made by grinding off the tapered end of a standard tap. (SAE taps work fine in all except the crossbolt threads, which aremetric.)

CRANKSHAFT

The Buick 300 crankshaft was unchanged through all four years of the engine's production. Cast from ArmaSteel (pearliticmalleable iron), it weighs 45.6 lbs. This crank has been used successfully for years for stroking the Buick/Olds 215 and the Rover 3.5 and 3.9L engines. However, the 300 crankshaft main bearing journals must to be turned down .200" to fit the early aluminum V-8 mains. Though this has rarely been a problem in actual use, for high horsepower or heavy duty applications, reliability would obviously benefit from retaining the full 2.5"" diameter main bearing journal. Fortunately, the redesign of the new Rover blocks included opening up the main bearing tomatchthose of the original 300 crank journals.

Mandatory Operations:

- Magnafluxing - The Buick 300 crankshafts are 35+ years old and the operating history of a particular crank is very seldom known. It is frustrating and expensive to build an engine, only to have it grenade because of a pre-existing crack in the crankshaft. Magnaflux inspection detects even small fractures and surface imperfections by the use of a magnetic powder and an electric magnet. The powder is dusted onto the crankshaft and a magnetic field is set up on the metals surface with the magnet. Cracks and surface flaws interrupt the magnetic field and force the powder to form lines along the imperfection. All competent machine shops can inexpensively perform Magnafluxing of ferrous (iron-based) engine components.
- With a micrometer, carefully check the main and rod journals for diameter, ovality and taper. Visually check for grooves or scoring, damage to the chamfers at the sides of the journals, and for blue tinting of the journals which indicate overheating. Have the main and /or rod journals machined .010" undersize if necessary and modify the block for undersize Buick 300 main bearings.
- Check the crank for straightness. This can be done either before any necessary machining or afterward. If done before, the check can be made by installing the crank in a lathe or a jigwhich holds both ends firmly centered. A dial indicator is placed on the center main bearing journal and the crankshaft slowly rotated. The journal should not indicate more than .002" lateral travel.

If the crankshaft has been machined or does not require machining, it can be installed into the block, using only the front and rear main bearings and caps. Lubricate the bearings and torque the caps to spec. Place a dial indicator on the center main bearing journal and spin the crankshaft. Again, the indicator should show no more than .002" total lateral runout. Any competent machine shop can straighten a bent crankshaft relatively easily.

- Install a new pilot bushing. If the pilot bushing is worn, the transmission input shaft as well as the clutch friction disc will wobble. This will manifest itself in a chattering clutch, hard shifts, and damage to the transmission. A new pilot bushing is only a couple of bucks and installation takes five minutes. The trick to removing the old bushing is to pack the old bushing full of heavy grease. Place an old transmission input shaft, or any metal rod which fits closely, into the bushing,. A few short raps on the rod with a hammer, and the hydraulic action of the grease will ease the bushing from the crank.

InsuranceOperations

- Chamfer the oil passages
- Deburr the crankshaft
- Chase the threads
- Cross drilling

CONNECTING RODS

There are several options available for the connecting rods. You can use the Buick/Olds 215 rod or any Rover 3.5, 3.9 or 4.2L rods. They all have similar dimensions and the required 5.66" length. Surprisingly, all of these OEM connecting rods are forged, thus making rod failure very rare. The connecting rods for the later Rover 4.0 and 4.6L are too long for this application, at 6.11 and 5.89". The Ford pistons which will be used require a .912" diameter wrist pin, necessitating resizing of the Buick/Olds/Rover rod's stock .875" small end. New stock rod bolts should always be used, or aftermarket bolts and nuts such asARPp/n 124-6001 installed for extra insurance.

As with the crankshaft there are several mandatory operations plus some which, while not being absolutely necessary, can reduce the chance of rod failure.

Mandatory Operations

- Make sure that if you are removing the rods from a donor engine that each rod and end cap are marked so that they are alwaysmatched to their originalmate.
- Bead blast the rods to make sure they are absolutely clean
- Magnafluxing - Prior to having any work done on the rods, they should be Magnafluxed to check for possible cracks. The machine shop should also check the rods for straightness.
- Have the small ends reamed to .905 - .907" , then honed to 9100 - .9105". Make sure the machinist hones the small end out to it's final dimension. Some shops may try tomerely ream to the finished size. Reaming is not a precision operation and cannot achieve the precise dimensioning required for proper fit of the wrist pin. The Buick/Olds/Rover all are designed for pressed wrist pins which are held rigidly in the rods and do not ride in a bushing. The small end should have a wrist pin interference clearance of .0015 - .0020" which will allow the pins to be pressed into position. The edges of the small end should be chamfered or deburred, after honing, to remove sharp edges or burrswhich may interfere with pin installation.
- After undergoing millions of cycles, used connecting rod big ends usually become oval, with the larger diameter parallel with the rod beam. This distortion prevents the con rod bearings from fitting properly and can lead to oil pressure loss, rapid bearing wear or a spun bearing. The rod big ends should be resized by a competent machine shop. Themachinist will:

1)Remove the rod cap and grind some material from the cap face and the rod face.
2)Reinstall the cap onto the rod and torque the bolts
3)Hone the big end to it's proper i.d.
4)Reduce the c/l to c/l distance as little as possible and insure that this distance is kept as consistent as

possible from rod to rod. This is a very important criterion that themachinistmustmeet.

Insurance Operations
- Polish the rod beams
- Have the rods shot blasted

FLYWHEEL

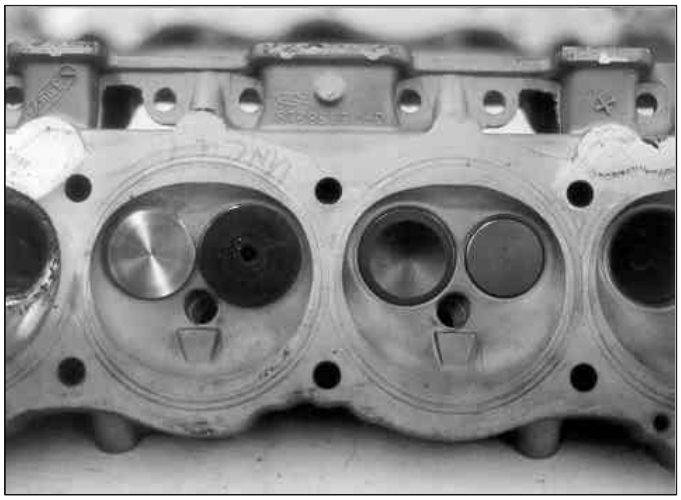
The rear of the Buick 300 crankshaft is 0.56" longer than the Rover crank it replaces. Therefore both the stock Rover and the Buick 300 flywheels will interfere with the bellhousing. The extra crankshaft length also places the flywheel ring gear out of reach of the starter. D & D Fabrication has engineered a special steel flywheel which both fits well inside the bellhousing and places the ring gear in it's proper position. This flywheel is drilled for a 10.4" Chevrolet clutch cover.

CAMSHAFT

Naturally, there are literally dozens of camshaft options, Rover, Buick and aftermarket. For best overall high performance street use, Dan recommends the Crower 50232 camshaft. The 50232 carries Crower grind number of 276HDP. Advertised lift is .488", with 1.6:1 rockers, 276° of intake duration and 281° of exhaust duration.Lobeseparation is 112°.

HEADS

When Buick introduced the 300 cubic inch V-8 in 1964, aluminum heads helped keep the weight of the new cast-iron block engine down. But because of the higher cost of aluminum casting vs. cast-iron, these heads were only offered on the '64 engine. The 1965 - 67 300 sported conventional iron heads. The aluminum heads weigh only 18.5 lbs. each, complete with valves, springs and retainers (vs. Rover's 20.0 lb.) and hold somewhat small valves at 1.625" intake and 1.313" exhaust.



Stock valves on the right, Pontiac/VW valves on the left

The advantages of the 300 heads for the stroker motor are numerous. First is obviously the light weigh. Secondly, the combustion chambers are dimensioned for the 300's 3.750" bore which works nicely to that of the Rover, particularly after the Rover bore is taken out to 3.710" .The 54cc combustion chamber, using a .050" thick composite Rover head gasket, will yield a 10.4:1 compression ratio. Because aluminum heads dissipate heat quickly, they can tolerate higher compression ratioswithout detonation.

The stock 300 heads will not breath sufficient air and fuel to keep up with the demands of the stroker engine. Dan's recipe calls for larger valves, mild porting and a few other tweaks to bring the heads up to the performance levels we are seeking. The intake valve is replaced with a 1.720" diameter piece from the 1988 - 92 Pontiac "Iron Duke" 151ci 4-cylinder engine (FederalMogulp/nV2530). The 300 head's exhaust is opened up using Manley P/N 11667-4 Volkswagen 38mm (1.496) stainless steel intake valves.Thelarger valves will require new seats, such as Precision PC1500-31 (exhaust) and PC1750-39 (intake), which any competent machine shop can easily install, and the new valves and seats get a three-angle grind. The machine shop will also grind the valve lengths to match the Buick 300 stock length.

The guides on the 300 heads are undoubtedly worn and the new valves stem diameters differ from the stock 300's, so the guides must be sleeved. One guide liner option is Ohio P/N 6896H. At the same time, have the machinist cut the tops of the valve guides and install a Perfect Circle style valve stem seal on the intakes only.

To assist with gas flow, both the inlet and exhaust port pockets should be opened up to match the valve seat diameters. The face of the boss supporting the valve guide is smoothed and shaped to minimize airflow restriction and the length of the guide cut down. (See Porting the Buick 300 Head, page 7)

Finally, have the machine shop take a skim pass on the gasket side of the head to insure a flat surface for sealing with the block.

VALVE TRAIN

Use stock Buick 215 or Rover pushrods and rockers, along with Crane 99849 small block Chevy springs. Hold the valves in place with stock VW(Sealed Power P/N VK204) and Pontiac (Sealed Power P/N216) keepers meshed with '87-'91 GM P/N 10040230 2.5L retainers. Either Buick 215 or Rover lifters willwork.

PISTONS

Dan's engine recipe incorporates pistons from the 1980 - 82 Ford 255ci truck engine, which is a small bore version of the 302. These pistons have a standard diameter of 3.680". To fit the prepared Rover cylinder bore of 3.710", the pistons must be ordered .030" oversize, which are readily available.(SilvoLite p/n 1176 orNylenp/n1134P,besuretospecify+.030")

FRONTCOVER

The Buick and most Rover front covers not only encompass the timing chain and gears, but also contain an integral oil pump, mounting for the water pump, and provide accommodation for the distributor. All of the Buick/Rover covers are aluminum and generally interchangeable though there are some Range Rover covers which used a very large and high mounted water pump which create clearance problems. 1962 - '63 Buick V-6 front covers can also be used, as they are identical to the one on the 215 V-8. Though generally similar, these are nuances with each of the covers which influence the choice of which to use on the stroker motor.

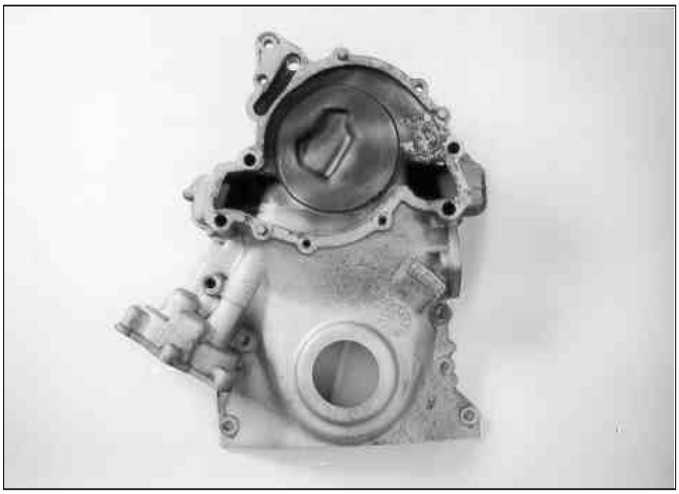
- Buick 215, '62-'63 Buick V-6 and early Rover 3.5L covers are readily available and cheap. There are two slight disadvantages in their use. First is that the original front seals were the archaic rope type, which always required finesse and a measure of luck to achieve a leak free installation. Fortunately, the rope seals can be easily replaced with a D & D Fabrication P/N 45932 one piece

rubber seal which installs into the cover without modifications. The second concern is that the degree lines on the cover's cast-in timing boss will not correspond to the timing mark on the Buick 300 harmonic balancer. Again, this is easily rectified:

1) With the crankshaft and front cover installed and the driver's side head off of the block, bring the #1 piston to TDC.
2) Carefully place a mark on the edge of the balancer, aligned with the 0° line on the cover's timing boss.
3) With a hacksaw, cut a groove at the marked location on the balancer. This is the new timing mark. (Filling in the groove with white paint makes timing a little easier in a dark garage.)

● Rover late 3.5 and early 3.9L covers use modern one-piece rubber front seals. Because of misalignment between the cover timing marks and that on the 300 balancer, the balancer must be remarked as above.

● Buick 300 covers have two 1/4" diameter holes for the locator dowels which must be opened up to 5/16". They were also of the rope-type seal design, thus requiring the same D & D replacement seal as the 215 and early Rover covers. The timing mark boss is in the correct position. Buick 1964 - 67 V-6 front covers are identical to the Buick 300.



Buick 300 front cover

● Late 3.9L and 4.2L Rover covers were radically different from the earlier versions. The oil pump was changed from the traditional distributor-driven type to a crankshaft driven pump. The water pump was also redesigned for increased capacity. The water pump and accessories are now driven by a serpentine belt rotating in the opposite direction from earlier engines. These covers can be used by elongating the keyway in the 300 crank to 1.97" and installing a Rover 4.0, 4.2, or 4.6L Woodruff key. Provision for the serpentine belt drive must also be made. (D&D Fabrications stocks the required pulleys and brackets for the serpentine belt drive.) Later in production of these engines, the front cover mounting hole for the distributor was eliminated, and the ignition changed to a flywheel triggered computer controlled style. The boss for the distributor is still in place and can be drilled out; howeve,r this is an operation requiring extremely precise machining. A fraction of an inch misalignment will cause rapid binding or wear of the oil pump drive gears.

● 4.0 and 4.6L Rover timing covers carry the new crank driven oil pump and water pump; however, they all use the flywheel triggered computer ignition. Even the distributor boss has been eliminated from the cover casting.

The recommended front cover for the stroker motor is the Buick 300 unit, followed by any of the Rover covers with a distributor shaft hole or the Buick/Olds 215/V-6. The distributor-less covers cannot be used without fabrication of a crank or flywheel triggered ignition. Dan recommends that if the Buick 300, the Buick/Olds 215/V-6 or the Rover 3.5L front covers are used, the oil pump should be uprated with a readily available high-volume kit which increases the pump gear length by approximately 1/4".

BALANCING

The Rover engines are internally balanced, which means that the crankshaft, flywheel and harmonic balancers are each individually balanced to a "neutral" state. The flywheel or harmonic balancer can be changed without affecting the overall engine balance. The Buick 300 engine was externally balanced which means that weights were added to the flywheel perimeter and/or the harmonic balancer to achieve a smooth running engine. If it becomes necessary to change a balancer or flywheel, the balance of the replacement must be matched to that of the original component.

The stoker engine should always be balanced. External balancing is the least expensive and quite sufficient for most purposes. For extended high rpm usage, it may be of advantage to have the stroker internally balanced using heavy plugs, made of Mallory metal, inserted into the crankshaft counterweights. This eliminates the possibility of torsional twist being imparted into the crank by the weight of the balancing weights on the flywheel. Internally balancing an originally externally balanced crankshaft is expensive, as the Mallory metal is costly, as is the machine shop time to bore the counterweights and install the plugs.

The OEM harmonic balancers for the Buick 300, 340 and 350 engines vary in configuration, but any one of them can be used for the stroker engine. For sustained high rpm use, go with a BHJ p/nBU-EBV6-7 balancer.

INTAKE

Naturally, there are dozens of intake systems which have been used over the years on the Rover and 215 engines, ranging form quad Webers to fuel injection. The choice depends on many factors including cost and hood clearance. In many sports car V-8 conversions and in kit cars, there typically is a minimum of clearance between the top of the air cleaner and the bottom of the hood. For a minimum intake system height and good street performance, Lagrou uses a stock Buick/Olds 215 4bbl intake. The 215 OEM manifold is the lowest one available and gives good performance from 1500 - 4000 rpm. The Offenhauser 4bbl intake is .25" taller than the OEM manifold without yielding a noticeable improvement in performance. The most desirable performance intake is the Edelbrock Performer which will pull well up to 5000 rpm. However it is .62" higher than the 215 manifold which makes in difficult to fit under an MG or similar car's hood. The ends of the runners on any of these manifolds will require mild grinding to match the Buick 300's larger ports as will the intake gasket.

An Edelbrock p/n1404 500 cfm 4bbl carb bolts directly to any of the listed manifolds and will require little tuning to make optimal power.

IGNITION

As with the intake system, choices abound for ignition

components. For cost considerations, and primarily because the combination has worked very well over the years, Dan recommends a stock OEM 215 distributor and replacing the points with a Pertronix "Ignitor" p/n 1181. Coupled with a quality 40,000 volts distributor, the system will deliver good spark through 7000 rpm.

STARTER

The OEM Rover starter as supplied on the 4.0 or 4.6 engineswillturn over the stroker motorwithout major problems. However, they are costly. In addition, the solenoid on most late Rover starter models points to the side, creating clearance problems in some installations. Earlier Rover starters will bolt right up to the newer blocks, but may have difficulty turning over a hot stroker motor and have the same solenoid clearance restrictions. The 215 starter requires a fabricated mounting ring to adapt to the Rover mounting flange and will also not be up to the torque requirements of the stroker. D & D Fabrications has developed a gear reduction/high torque starter to fit the Rover block. This starter is very compact and the solenoid is tucked out of theway.

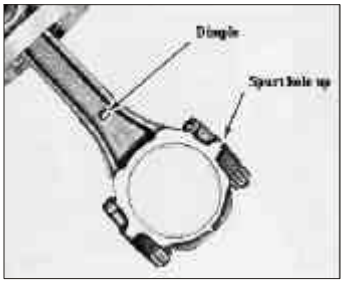
Assembly

With only a few exceptions, assembly of the aluminum stroker is identical to that of any other high performance engine .

D&D seal adapter kit

● A D & D Fabrications adapter kit is required to install a special rear main seal between the Rover block and the Buick 300 crankshaft. Installation is very simple and requires no machining other than drilling five small holes, one in the main bearing cap and four in the back of the block. Detailed instructions comewiththekit.

● There are two requirements for proper connecting rod installation, whether you use the 215 or theRover rods:



Correct rod orientation

● On one side of the rod beam is a cast-in dimple. as shown at right. The rods must be installed with this dimple toward the front of the engine on the right bank cylinders and toward the rear on the left bank. The dimples on the rods on each crank journal will be facing one another.

● Each of the rod caps have oil spurt holes on one side, next to the bolt. Assembly must be made with the spurt hole "up" as shown above.

● Use pre-1996 Rover head bolts or those from for a Buick/Olds 215. An alternative is a set of ARP p/n 124-4003 studs. The '96 and later Rover head bolts are torque to yield, so should not be reused, and are costly. Buick 300 head bolts are 1/4" shorter than the early Rover or 215 fasteners, as they were designed to thread into a cast iron block.

SOURCES/REFERENCES

● D & D Fabrications, 8005 Tiffany, Almont MI 48003 (810) 789-2491 Send $3.00 for catalog.

● "The Rover V8" by David Hardcastle ISBN 0-85429-961-0

● "Tuning the Rover V8" by David Hardcastle ISBN 0-86429-933-5 V8

PORTING THE BUICK 300HEAD

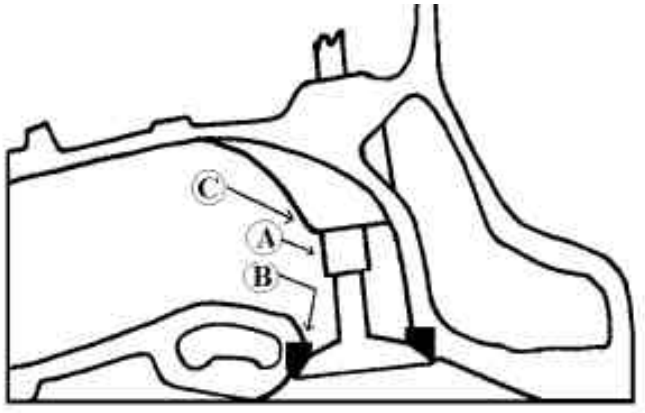
ByKurtSchley

Achieving the most efficient port shape for any normally aspirated engine requires the use of an accurate flow bench, an experienced operator and lots of money. However, some basic home porting with simple tools can yield significant improvements in performance. Have the machine shop install the larger valve inserts, shorten the bottom of the valve guides by about 0.25”, install the guide liners, and chamfer/taper the cut guide edge (A). Don't have them do any valve grinding or installation yet and do not get carried away and have more of the guide length removed even though it creates quite a bit of obstruction. The shorter the guide the more potential there is for valve wobble. As importantly, the guides provide significant cooling for the valves.

Your first at-home task is to smooth and match the transition from the port to the valve seat insert (B) On the stock 300 heads, there is usually a pronounced lip immediately behind the insert where the port is actually a little larger in diameter than the insert. The gas/air flow impinges on the back of the insert and creates power robbing turbulence and back pressure. The transition between the port and the new, larger valve seat insert must be smoothed using a hand grinder. *Remember that the head is relatively soft aluminum and it is easy to remove too much material!!* You want to just match the edges of the insert and the port, do not try to enlarge the port itself as this will slow down the charge velocity.

The next area of attention is the aluminum boss holding the valve guide (C). The step from the boss to the smaller diameter guide adversely affects a smooth flow. With a long shank on the grinder, taper the boss gently down to the guide, being careful not to nick or gouge the guide itself. Now it is time to examine the walls of the ports behind the valves.Asaluminum head casting technologies in 1964 were not up to today's standards, the port wall are sometimes excessively rough. These can be carefully lap sanded, again taking care to even out the walls while not actually enlarging the ports. Do not polish the walls to a perfectly smooth finish, as a certain port wall roughness is needed to keep the fuel in suspension in the air stream.

Now the heads can be returned to the machine shop for valve installation and a good three angle valve job. V8



Cylinder head porting guide

HOW IT WAS DONE #1

Owner: Les Shockey
City: Alexandria, VA
e-mail: les.shocky@verizon.net
Phone: 703-960-1549
Model: 1969 Triumph TR6
Engine: 351 Ford Windsor

Smokin' - Les Shockey's TR6 laying some serious rubber!

Engine: 1977 Ford 351 Windsor, with stock bore and stroke. Hydraulic cam by competition cams, with a 284° duration, and a lift of 0.541/0.544 intake/exhaust. Adding to the power boosters are roller rockers and 10:1 pistons. The heads have been ported and polished. The induction system consists of an Edelbrock Victor Junior intake manifold, with a Holley 750 carburetor.

Transmission: The transmission is a Ford C4 automatic, with a TCI flexplate, and a stall speed of 4500 rpm. The Transmission has been rebuilt and modified to stand the stresses of drag racing.

Exhaust: "Hooker Street-Rodder" headers are used, dumping into a pair of Magnum mufflers. The primary tube id is 1 5/8", and the exhaust pipes are 2 5/8" - dumping some serious exhaust flow! The exhaust system has been Jet coated.

Radiator/cooling system: Hot water is pumped through a five-row, 1/2" tube Griffen aluminum radiator by an Edelbrock aluminum water pump. Air flow through the radiator is helped along by an electric fan, removed, complete with fan shroud, from a Ford Torus. The fan is installed in a puller configuration, and draws 20 amps! The thermostat has been removed, and a restricter plate substituted.

450+ HP! Note the full radiator shrouding in front and in back of the radiator

Brakes: Front brakes use the stock rotors, with 4-pot calipers from an early 80s Toyota 4x4 pickup truck. Rear brakes are Chevy high performance disc brakes. Hawk Blue pads are used front and rear.

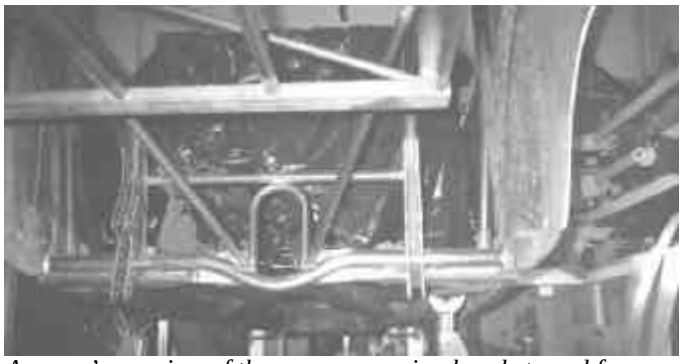
Wheels/tires: CenterLine aluminum, 7 x 17 in front, and 11 x 17 in the rear. Tires are BFGoodrich, 215/60 front, 315/35 rear.

Suspension modifications: At the front, things are pretty much as stock, but the shocks are from a '69 Camaro, and the springs are stock TR6 *rear* springs.

In the rear, things get quite interesting, as can be seen in the photographs below. The entire back half of the frame, and a goodly portion of the body as well, has been completely rebuilt to accommodate a 4-link suspension set up. For additional rigity, the roll bar has been tied into the frame as well.


One of the weak points of any body/frame automobile is the flexing of the frame. This frame should be pretty rigid!


A Ford 9" axle and big balonies don't leave much room for seats and stuff! Not that there was much room before.



A worm's eye view of the rear suspension brackets and frame structure - lots of triangulation for rigidity.

Plenty of adjustment available for the 4-link bars

Rear end: Ford 9" housing, with a 3.70 limited slip differential, and Strange axles, narrowed to fit. Coil overs and a Panard rod control axlemovement.

.

*Coil overs, Panard rod, and **BIG** tires!*

Electrical system: A Ford one-wire 100 amp alternator, Tilton Super Starter, MSD ignition, and a Mallory distributor keep the electrons moving where they should. Dual batteries just in case.

Instruments: All instruments are Autometer, mounted in a custom dash.

Interior: Custom upholstery, with a tilt steering wheel from a Ford LTD. Since these photos were taken, the seats have been replaced with competition style buckets - a little hard to get in and out of, but once in, they hold the occupants snugly and comfortably.

Note the driver's side competition safety belt!

Body: For the most part, the body is stock, but the rear fenders and the hood are of fiberglass, with a scoop in the hood. The trunk compartment has been totally revised, and now contains the fuel cell and the dual batteries. The front bumper has been replacedwith"bumperettes,", made fromTR6rear bumper bars.

A sleeper for sure!

Not much room for luggage!

Conversion done by: All conversion work was performed by Les. The conversion has been on the road for 12 years now, but Les considers it to be a "work-in-progress", and, as such, is never really completed. Total cost for the conversion is approximately $8,000, excluding the original cost of the car.

Source of parts/information: *Trial and error!* twelve years ago, this newsletter didn't exist. Most people, like Les, were completely on their own for a project such as this. Main stream magazines, such as Hot Rod and Car Craft, wouldn't touch a "furrin'car." Most of them still won't!

Performance data: Quarter mile @ 11.0 seconds/125 mph. Top speed - 125mph. Roadhandling is very good, but no quantifying numbers.

Problems encountered since completion: The cooling system was upgraded, better brakes fitted, hi-torque starter added, and a second battery installed, eliminating most problems.

Recommendations: The 4-link rear suspension setup is a marked improvement over the stock IRS. Jet coating the exhaust helped hold down under hood heat.

Things I would do different: Probably go with a five speed in place of the automatic.

BUILD IT AND THEYWILLCOME

ByBarrieRobinson

Well, that's true! Start building an MGB V8 and they will come. The bills that is.

I had been driving my MGB GT for some eight years, summer and winter, rain and snow, blistering hot and freezing cold. But a little thing stirred in my brain when I realized that a "factory option" transplant of the Rover V8 would solve its lack of oomph on the highway. So I decided to build anMGBGTV8!Thisthen is an attempt to record my path to date together with some of my mistakes - numbered for easy reference! The saga is by no means over, as youwillseeIstillhaveafairwaytogo.

> **Mistake One! THE BIG ONE -** Not reviewing very carefully all my requirements and options before even learning to spell ***veeeight***.

In the Beginning

Before starting such a project you really have to make some important decisions because it is a little trickier than it first appears. When one starts on a restoration job on a car, the mind has already accepted the fact that it will be expensive. But then all the parts are there, though some may need replacing or rebuilding. However, if one gets the bug to "just drop in a V8" somehow the mind does not even begin to explore the costs. You think that all you need is some cheap V8 picked up for a song, bash the engine bay around, and bingo, one V8 powered MGB. Unfortunately it does not work like that. (Unless you are the consummate mechanic with all sorts of contacts, tools and suppliers). So, before you start, you have to determine whether you are going to build an evil handling, clanky, troublesome, and short lived rocket or something with reliability and solid performance. If the former, then you can just bash away and hope for the best. So the brakes don't do very well, and so the thing hops like a rabbit, to say nothing of the need to continually fix things. Not that there is anything wrong with that! But if you are after a good conversion, you will be faced with many decisions and many bills. Problem is, you may very well get onto the path of "well, it would be silly to spoil the car just for the sake of a few hundred dollars."

> **Mistake Two -** Not robbing a bank.

TheBody Declines

I took my old faithful red MGB GT to a chap to get some minor body work done because obviously it would be silly to not do it before dropping in the engine. While looking at it in his shop, a sharp finger of a friend revealed a hole in the windscreen surround, then another, followed in quick succession several more. More poking revealed the body was doomed, so I gladly bought a "excellent shape" Virginian shell from the same shop, and paid for the dog legs and rear quarter to be fixed. More on this shell later.

> **Mistake Three -** Buying a shell because "a good one" was laying conveniently close and not looking for a ***really*** good one.

ANewTransplant Organ is Found

As advised by someone whose name escapesme,Iboughta1982 Rover SD1 and tore out the engine and gearbox, sold the rest as parts and broke even. So far so good. I stripped the engine and found most of the Mekong Delta inside. I never knew you could get such perfectly round cam lobes! Naturally, a rebore was required and all wisdom pointed to new pistons, rings, bearings and such. Well, it's no good spoiling the rebuild for a couple of hundred dollars, as you must have a reliable engine, and so one might as well get some of the "weaknesses" fixed and buy goodies like a duplex timing chain, mains stud kit, etc. So I priced out the spares, added rebore charges, rebuild charges and all associated costs. To my amazement I found for the same price I could get no expense spared (genuine Rover parts) rebuilt high performance 3.5 litre engine from England, complete with all the ancillaries. Of this, more later. So much for buying an SD1, although I did win a gearbox out of the deal. But then I had the towing charges plus all sorts of added costs. even doing the deal costmetravelexpenses.

> **Mistake Four** - Buying an old Rover SD1 for the engine and gearbox

TheHelpfulHouse

I begged an acquaintance, who owned a garage specializing in British cars, to dress the engine bay of the 1970 shell to take the V8. Big mistake and a big cost. The garage did not have the experience in hot-rodding and this is what I was doing. The work was adequate but not good enough for a reasonable looking engine bay. But I hasten to add this was my fault, not my friendly car chap. So I searched for someone with wide experience, in particular restoration!

> **Mistake Five -** Using inexperienced bodywork people.

TheHot Gas Seduction

Now there are headers and there are headers. I had already bought the "hugger" variety, while mentally noting there were numerous reports of heat problems under the bonnet. Then I happened to get sent a picture of some "extractors" made in Australia. They had obviously been designed using Playboy calendars. It was love at first sight, and as it would be silly to spoil the car for just a few hundred dollars, I bought them. In stainless steel no less. It would, I rationalized, solve the under-bonnet heat problem and give me extra BHP. So the huggers previously bought had to be sold cheap over the "net." Now this is about where the rot set in and I found my resistance to superlative bits completely eroded. When the beautifully polished headers and secondary pipes where unpacked, something happened, I entered a state of "why spoil the car for the sake of few hundred dollars" stupor. In retrospect, I think I should have got them inmildsteelandhadthem Jet-Hot coated

Mistake Six - Falling in lovewhiletrying to be rational.

The Experienced house

The shell obviously needed succor and luckily I found a place that did strange off-the-wall stuff from stitching the block of a 1935 Armstrong Sidderley to rewiring a 2000 Mercedes (Mercedes sent it to them to fix). They also did museum work and had a clean,well-organized shop. I moved m y shell there and they dropped the V8 in like a hot knife through butter. Sway bars, steering rack andAustralian exhaust (more of this latter) were all made to fit neatly.

Mistake seven - There was nomistake number seven!

Take a powder

When I did my concourse Austin Healey I had everything powder painted, but I reasoned that this relatively expensive treatment was not needed for this MGB V8, as it would be a "driver." But then I considered the huge advantage of powder paint, which is incredibly tough (only methylethylketone will take it off and even then with the aid of a scraper*). So why spoil the car for a few hundred dollars!* I had the tank, cross member, suspension, all brackets, heater air vents, bumper brackets, etc. etc., all powder painted.

Mistake Eight - Not getting ALL of the parts for powder painting in one lot and then get them done. Partial piles of bits is expensive because of the one-time set-up charge

TheHeartArrives

The company I had found in England specialized in Rover engines and I drooled over their wares. I had compared costs and it was obvious that I should at least get a long block from them. This would avoid risking a motor shop rebuilding my very tired SD1 motor and, as I had found, would be probably be much cheaper in the long run. The risk alluded to here is that obviously a specialist has all the wrinkles ironed out due to experience of the motor. However, as luck would have it, the company had available complete 3.5 litre Rover engines rebuilt at no expense spared, by the UK Ministry of Defense. I bought one, but had it upgraded by the company with high compression pistons, mild cam, duplex timing chain, and mains stud kit. The cost, and remember it came with all ancillaries, including plugs and leads, was what I would have paid for a long block overhaul. But this beauty would be built by specialists. It arrived in a cardboard carton, believe it or not! At enormous cost, I had a trailer hitch fixed to my VW Golf, borrowed a small trailer to pick up the motor delivered to a central freight point (much cheaper) 60 miles from my home. It would have been cheaper to have hired a small truck than get a hitch fitted.

Mistake Nine - Buying equipment thatwould rarely be used after.

The Extensive Surgery

While fettling my engine bay for the V8 my garage chap said "*it would be silly to spoil the car for a few hundred dollars,"* and I should have the shell dipped. So itwasdippedandthisrevealeda disaster under the gleaming paint. A recommended body man was called in on the advice of my garage man and he quoted a price to fix the whole thing to "better than new." The body was done, but I asked for one or two other things to be done, like air holes in the front dam andmodifying the bonnet (hood). Through the Internet I found original panels at a fraction of the cost of Taiwan specials. The result was stunning, and I am referring to the bill! No, the body was absolutely beautiful but the "extras" had a high price tag.

Mistake Ten - Not getting a firm quote for a job AND for any additionalwork

AGood Skin Job

With a gorgeous shell, my shop man said that as the body had been restored so staggeringly well by a body man that usually did museum cars, it would be a shame to paint it myself as I planned. I had imagined that as the cost of painting was largely labour, I could save a bundle painting it myself.After exploring the cost of renting equipment, buying the various strange tools, learning as I went, it soon became apparent that it would be a shame to cover the gleaming metalworkwithapoorpaintjob. *It would be shame to spoil the car for the sake of a few* ***thousand*** *dollars* (By now we had been conditioned from a few hundred dollars to a few thousand dollars). Learning from my body work job, I asked the recommended paint man (another museum fellow) to give me fixed cost. He gave me one and I went straight to the single malt bottle to consider the cost. Next day, after due consideration, I agreed and away went the shell to be painted. But I again got hit for "extras."

MistakeEleven - Same as ten

The RearLegsNeedAttention

With some 200bhp going in I knew that traction bars were essential and telescopic shocks were desirable. I bought a rear end shock kit and then found it confusing as to the fitting of traction bars. Most kits seemed to dislike each other and give a kluge appearance with a lot of dangling bits that would not help clearance. So I searched for someone with experience in MGB rear end treatment. I found a company inAustralia that not only

built such kits but did front disk sets as well. *It was the same people from whom I got my extractor rig!* The rear shock set up gave a true vertical mount with the traction bars neatly integrated. So I bought the whole rig. They also do a Panhard rod, which I now have on order from them. My regret was that I had already built the front calliper set-up using Triumph 2000 bits with MGB bits as described in a book.

> **Mistake Twelve -** Building something recommended in a book - Advice from books is usually out of date and not complete.

Disassembly Can Be Injurious to Your Health

When I got the shell (sans engine and gearbox), I took it to bits as obviously parts would need cleaning, fixing or replacing. I was surprised to find myself falling into the trap of not drawing, labeling and putting the assemblies into specifically labeled plastic bags - hail to Glad! I do not, as I thought, remember which parts go where, and what, and how they assembled.

> **Mistake Thirteen -** Not labeling parts, not putting all the parts in labeled bags, not making drawings

And with that unlucky number, I leave you now. More to come, stay tuned. V8

BOOKSHELF

Carroll Smith's *Nuts, Bolts, fasteners & Plumbing Handbook*, Motor Books International, ISBN 0-87938-406-9

An excellent guide to those items that are almost invariably changed during an engine swap, and whose functionality can be critical to the success - and safety - of the swap.

MARKETPLACE

1994 Rover 3.9 liter engine short block approx. 8000 miles $350.00.

GM bell housing to fasten a GM T5 or T50 5spd. or T10 4spd. to a Rover 3.5 or 3.9 L or GM 215 ci engine - $200.00.

Keith Childs
105 Skylark Drive
Hamilton, Ontario
Canada, L9A-5A9

Supply your own caption!

HOW IT WAS DONE #2

Owner: Robert Franzen
City: Stevensville, MI
Model: 1979 MGB
Engine: Buick 215

Engine: A 215 ci aluminum V8 from a 1962 Buick special, the engine has been rebuilt to stock specifications by Wolfies Competition Engines, and sports a Carter 500 cfm carburetor, a Mallory Unilite solid state ignition module, and a MSD 2 Master Blaster ignition coil. A heavy duty oil pump has been installed, pumping through an external oil filter.

Transmission: A Borg-Warner T5 five speed transmission from a Camaro Z-28 is used, mated to a stock bellhousing. The transmission drives a shortened Z-28 driveshaft, modified to mate to the Ford rear axle.

Clutch/flywheel: The clutch, flywheel, and pressure plate ar all by South Bend Clutch, operated by an internal throwout bearing.

Exhaust headers: Towery Foreign Cars supplied the headers, made of stainless steel.

Brakes: Front brakes are stock, with drilled rotors and heavy duty pads, while the rear brakes are stock Ford drums.

Wheels/tires: Tires are Michelin 185 R 14 91T M&S, mounted on stock wheels.

Suspension Modifications: A heavy duty (7/8") sway bar has been installed at the front, along with V8 suspensions bushings. At the rear, composite (graphite) springs have been installed, along with an anti-tramp bar from Moss Motors. V8 bushings have been used here as well. Shocks are Spax air adjustable tube shocks. An upgrade is planned to add tube shocks at the front.

Radiator/cooling system: The stock radiator has been modified, changing the outlets to match the V8. "Water-wetter" additive is used to help with the cooling chores, in conjunction with the stock electric fans. Water is routed in and out of the radiator via "Cool-Flex" hoses.

Rear end: The axle is from a Ford Falcon or a Mustang, narrowed to fit.

Instruments: Stock MG speedo and tach bezels are modified to accept VDO instruments. Speedometer is electronic.

Conversion done by: John Freeling, Bruce Wolf, Kurt Schley, Glenn Towery, and the owner, Robert Franzen.

Source of parts/information: Moss Motors, Towery foreign Cars, Kurt Schley, car shows, and other V8 owners.

Cost of conversion: Total cost of the conversion, exclusive of the original car, was around $2,000 - $2,500. V8

Happiness is going to your high school reunion and learning that the boy voted most likely to succeed - didn't

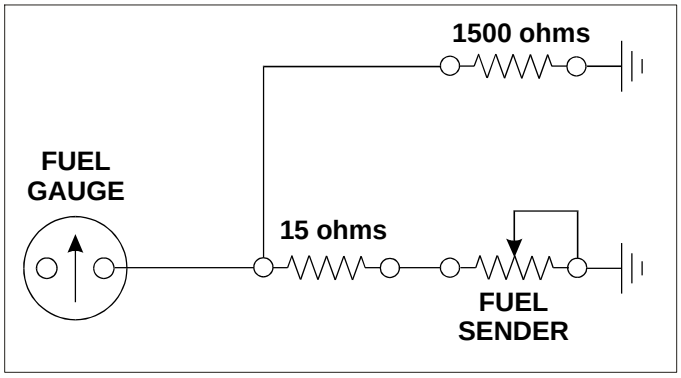
A woman has the last word in any argument. Anything a man says after that is the start of a new argument.

FUELSENDERMODIFICATIONS

By DanMasters

Among the many other things you will want to change while you are doing a V8 conversion, you may want to change out all your gauges. At the least, you will need to modify the tachometer to correctly read 8 cylinders, rather than 4, and you will need some type of ratio adapter to correct the speedometer, as you will most likely be swapping out the transmission, and with it, the speedometer drive gear. It might be easier, and probably much neater, to just go ahead and replace the gauges with a set of aftermarket gauges from VDO, Autometer, Stewart-Warner, or other maker. With the exception of the fuel gauge, changing over is a pretty painless operation. Mounting the aftermarket sender can present a challenge, and modifying the existing sender, although usually not difficult, presents other problems.

Modifying the existing sender: The fuel sender range, from full to empty, on a TR6 is approximately 18 - 260 ohms. The fuel sender for an Autometer gauge is 33 - 240 ohms. Using Ohm's law and a little bit of math, we can show that the TR6 sender can be modified to give a 32 - 232 ohm range - close enough for practical purposes - by placing a 15 ohm resister in series with the sender, and a 1500 ohm resistor in parallel with the combination as shown below. Using these values (standard off the shelf resisters), the TR6 sender will now drive the Autometer gauge to read empty when the tank is empty, and full when the tank is full, just as before.



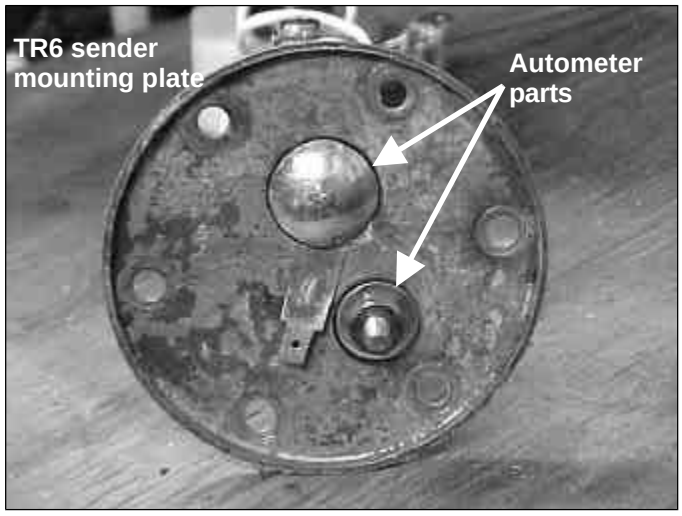
Modifications to match stock fuel sender to aftermarket gauge

However (and there always seems to be a however, doesn't there), the gauge reading will be very non-linear. On my TR6, I have about 3 gallons left, in a 12.5 gallon tank, when the gauge reads half full. The reason for this has to do with the difference in construction between the two gauges. The stock gauge is of the bi-metal strip variety, while the aftermarket gauge is of the dual-coil type. In a pinch, this will do, as long as you know about the problem, but it would be much nicer to have a gauge that reads accurately over the entire range, not just at the high and low ends.

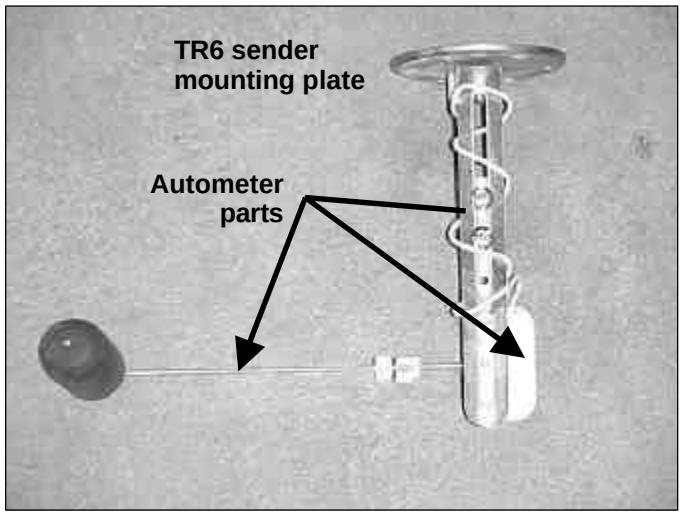
Replacing the stock sender: A better approach is to just replace the stock sender with the matching sender from the same vendor as the gauge, complete with vendor supplied mounting details. While this sounds rather simple, in practice it can be quite difficult. Usually, the mounting plate for the new sender is just enough different from the existing sender to make it virtually impossible to adapt it to your fuel tank.

Luckily, there is a way to keep the best of both worlds - use the new sender, but maintain the existing mounting plate. Details of doing this will vary from car to car, but the overall scheme will be the same regardless of make or model.

The photos below show how I merged the stock and the Autometer parts to allow me to use the Autometer sender in my TR6. The procedure would be very similar for any car.



Modified sending unit, top view



Modified sending unit, component view

The first step is to remove the sending unit from the mounting plate. The sending unit will be attached to the plate, in most cases, by either rivets or spot welds. Either way, use a grinder to remove the sender, grinding away the spot welds or the rivets. After the unit is remove, the next step is to drill two holes for the new sending unit - one for the sender itself, and one for the electrical connection. Attach the sender, adjust the float according to the manufacturer's instructions, mount the assembly, and you are in business!

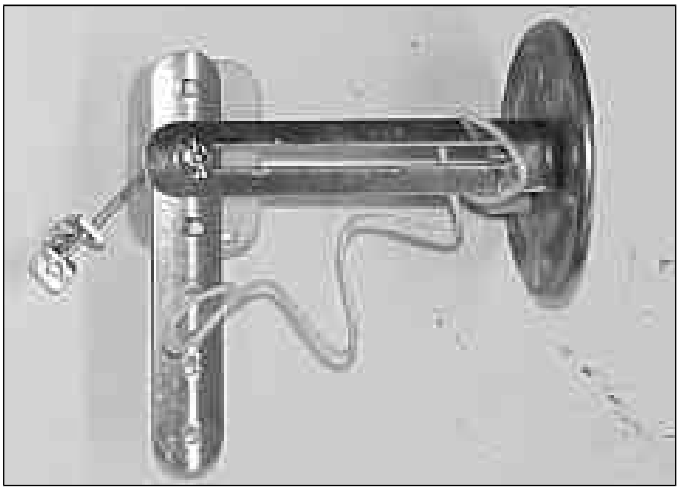
That is, if you are installing the sender in a tank that has the unit installed from the top, such as the TR6. For a side mounted unit, such as found in an MGB, a little bit more work is required. In this case, you will either have to modify the sender bracket or make a new one. A fairly straight forward proposition, but a couple of items need mentioning.

The first thing to notice, in the photo below, is the shape of the sending element itself. Notice that it is not flat, but has a "peak" to it. This peak matches the shape of the mounting bracket, and serves to help position the element against possible

movement. If you wish to make a new bracket, one that holds the sender element in the correct position to suit the tank, you will need to keep this shape in mind, duplicating it as much as possible. Whatever you do, you want to make sure that the element does not move with respect to the tank - only the float and the float arm should be allowed to move. Otherwise, accuracy is severely reduced.

Sending element details

Perhaps an easier way would be just to cut the top half of the mounting bracket, rotate the lower half 90º and weld the two halves back together, as shown below (for this illustration, the brackets haven't been cut or welded, just positioned for illustration purposes - this is from my own TR6, and I didn't want to cut it).



Bracket modifications for horizontal applications

Voltage regulation: Most gauges available today from the aftermarket are of the "dual coil" design. In this design, current through one coil is dependant on battery voltage, and current through the other coil is dependant on battery voltage and sender resistance. The position of the needle is then determined by the *difference* in current between the two coils. As battery voltage changes, current through each coil will change by the same amount, thus the needle position is independent of battery voltage, and no voltage regulator is needed. When you install your gauges, be sure to eliminate the gauge voltage regulator (stabilizer), and connect the new gauges directly to an ignition key switched power source (a green wire in a British car). V8

BRITISH V8 ARTICLES

Articles of interest from recent publications

a) In the July 2001 issue, **Car Craft** magazine ran some dyno tests on a Ford 302 crate engine. The results? How does 370 HP at 6000rpm sound? Torque? 358 lbft at 4100rpm, and never less than 310 lbft from 2500 to 6400 rpm. All this from an engine that can be bought off the shelf for around $3,000.

b) The October 2001 issue of **Mustangs & Fords** magazine has an article on converting the cable operated clutch, as used on most Ford T5 applications, to a hydraulically operated clutch. The slave cylinder mounts on the side of the transmission, which may help with some clearance problems.

c) The July and September issues, **Hemmings Rods & Performance** had articles on the Buick V8 family of engines, including 215 aluminum engines so popular in our British V8 conversions

NEW PRODUCTS

Two new item from Dan Lagrou, of D&D Fabrications: first is this stainless steel MGRV8 style exhaust system, and second is this custom transmission crossmember - both items for the MGBV8 conversion. These super nice items should solve a lot of problems for MGB/V8 conversions. See the D&D ad on the back cover for information on other products and services from Dan, or Contact Dan at

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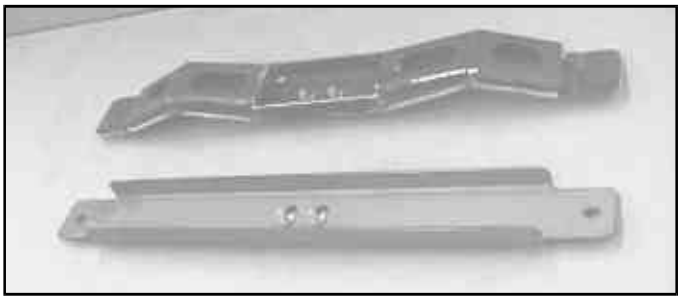
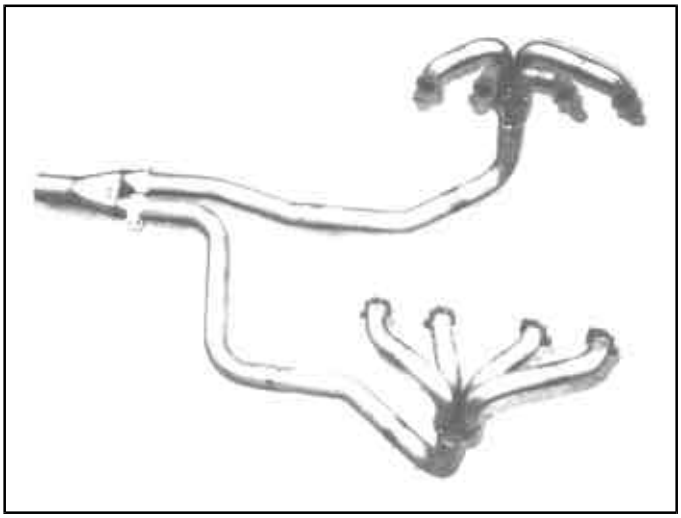




D & D FABRICATIONS CUSTOMER APPRECIATION DAY

By Kurt Schley

Dan and Karen LaGrou of D & D Fabrications recently hosted their first Customer Appreciation Day at the D & D facility in Almont, MI. Dan has specialized in the Buick/Olds 215 engines (and the their Rover descendant) for many years. D & D has also branched out to become the largest US supplier of MG V-8 conversion components, offering the first complete kit for the V-8 swap. At the NAMGBR MG V-8 meet in Sebring Florida last March, the idea of an open house was hatched, ultimately culminating in a gathering of MG V-8's and an esoteric collection of other 215-powered vehicles on the Lagrou's front lawn and driveways on August 11. Attendees journeyed from as far away as Washington DC, California, and Canada, so the next party should be billed as the D & D *International* CustomerAppreciationDay.

Rumbling in from all over the map, 15 MG V-8's rolled in under a threatening cloud cover. In addition to the MG's, the crowd included a nitro-burning hydroplane which held several national speed records in the mid seventies. The owner fired her up for about 60 seconds, which was enough to have every one hugging their ears VERY tightly. Alongside the boat was Ted Lathrop's fire red TR-6/Chevy 350, a dual-quad 215 in an immaculate Buick Special, a really nice Olds F-85, and a Morgan +8 (with a late Rover engine stroked with a Buick 300 crank). Early in the afternoon, Kerry McLean arrived towing a special trailer behind a dual-quad and blown 'Vette. On the trailer was a most unique 215 application, one 8' diameter wheel with a 215, transmission, radiator and seat hung in the center. Later in the afternoon, an enclosed trailer arrived, holding Rosie Lackey's Triumph 750 motorcycle which was being run at Bonneville Salt Flats a few days before. Just beautiful engineering, and it runs at 200+mph.

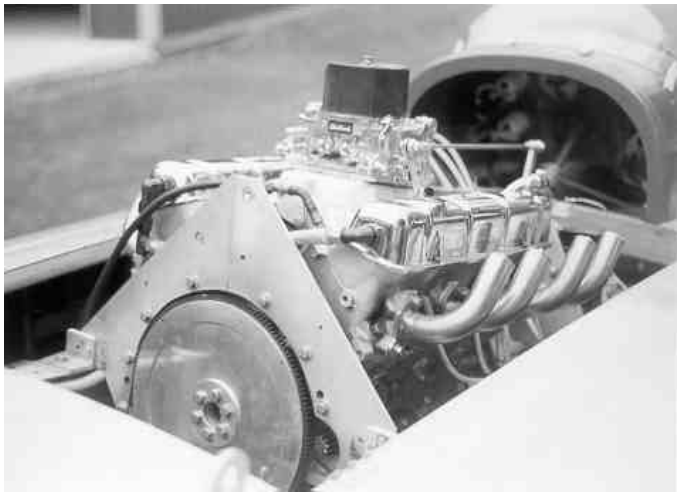
Sitting in D & D's shop were several piles of MG conversion parts, engines and transmissions which had been ordered previously and were awaiting pick-up. The largest collection belonged to Rick Ingram, including a Rover 4.0 block with Buick 300 crank and ported heads, about 293 inches! Stacked next to the engine was a T-5 transmission plus all the parts to install both. Rick walked into the shop, saw his engine and smiled so wide the top of his head was almost detached. With the parade ofMG'ers tramping out of the shop with arms loaded, it looked like the D & D blue-light special was in full swing. The shop and the attached storage area is without a doubt the world's mother lode of 215 engines. Pallet racks and shelves overflow with short blocks, long blocks and complete engines including every variation such as the Jetfire FImotor.

A large part of the fun was examining and driving one another's V-8 conversions. A constant stream of MG's roared in and out of the drive, very few with their owners behind the wheel. (Fortunately, most of the neighbors are gearheads, so there were no calls to the local constabulary!) Mike Moor's Buick 300 powered B must have racked up about 200 miles on the streets ofAlmont, as everyone took a turn. Several of the test drivers were there to research doing a conversion, gather info, and decide if they wanted to tackle the project. Without exception, they would take their first MG V-8 for a drive, arrive back with a silly grin and a gleeful shout would go up from the crowd, "New Convert, New Convert!" The convert's broad smiles stayed in place as they each made a beeline to the shop and the order forms.

Great food in copious amounts rounded out the great time and there was even a report of a beer or two (wink, wink) Way too soon, the evening arrived concurrently with some raindrops. Everyone fired up the cars to reluctantly head either home or back to the hotels. All the participants had a really great time and sincerely thank the LaGrou's for their hospitality.

Lots of great cars, great people, and great food = GREAT time!

Kerry McLean's unique 215 powered "unicycle."



Buick 215 motivated hydroplane boat, the prop drives off of the crank snout. A tiny bit loud when running

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