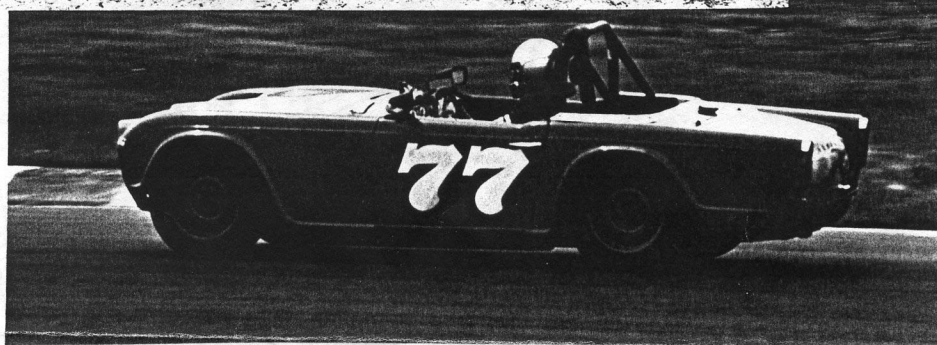




# VERDRIVE

The Newsletter of the Ottawa Valley Triumph Club

June 1993



## VARAC Races Shannonville, July 3 & 4

### Picture Your Car Here !!

Send us a photograph of your  
Triumph and it might be featured  
on the next cover of *OVERDRIVE*!

The Ottawa Valley Triumph Club publishes *Overdrive* monthly and distributes it to all members, in addition copies are exchanged with other clubs. Articles of general interest to the membership are welcome and should be sent to the Editor. Advertising is welcome and rates are available from the Editor.

The current Executive consists of;

Derek Holbeche  
President  
1-267-6676

Steve Challinor  
Vice-President  
837-9317

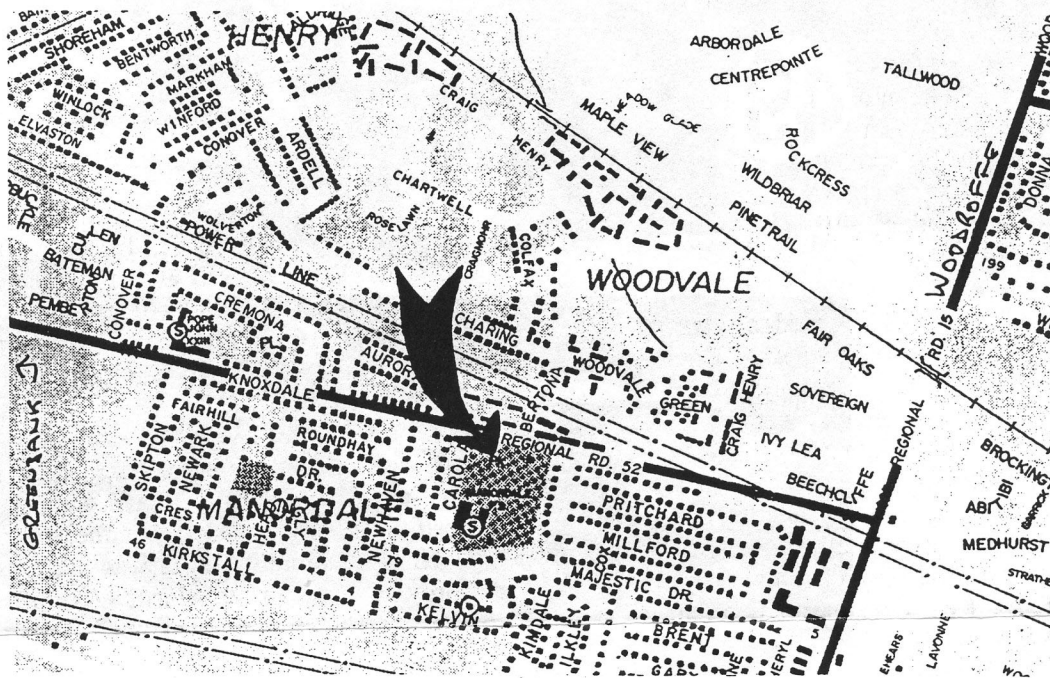
John Day  
Secretary  
723-9876

Jane Benco  
Treasurer  
727-8113

Juliano Benco  
Special Events  
727-8113

Pat Mills  
Regalia  
825-1698

Membership  
Dave Huddleson  
822-1315



The OVTC meets the fourth Monday of every month, at 7:30 PM. The club meets at the Manordale Community Centre, Knoxdale Road at Carolla (see map). Meetings include technical seminars, video presentations, general discussion, restoration techniques and more. In addition, the club hosts an annual Christmas party and other social events, as well the club participates in interclub events.

Membership is open to all individuals and companies interested in Triumph Sports Cars, their enjoyment and their preservation. Membership is \$30.00 per year for a household and \$60.00 per year for Corporate members.



## OTTAWA VALLEY TRIUMPH CLUB JUNE 1993

### Editor's Babble:

Hi gang! I hope everyone's having a good, accident-and-incident-free summer so far. By the next time you hear from me, I should (if all goes well!) be on the road in my revamped '76 TR6. So far, things are going great. So great, in fact, that this is the third time I've edited this to update the progress. At present, the car has been painted (a FANTASTIC job by Joe Panuccio at Milano Auto Body!!), and the panels are half-fitted to the car. My parts order has been placed, priced and sourced through Terry Dale's many connections, and virtually all items are now in, with the remainders due by next week. After 10 years on the sidelines, I can almost taste the pavement! There is a good chance the car will be ready by the meet in Shannonville, but I don't want to rush things and be sloppy. In the mean time, Juliano and I can usually be spotted in my garage until the wee hours (P.S. - spectators and tinkerers are welcome). Happy motoring, all!!

### Newest Members of the OVTC ('pledge' class):

Everyone join me in congratulating David and Lynda Huddleson on the birth of their first child, a daughter. Little Vanessa Huddleson, weighing 7lb., 9 oz., was born at 11:00 a.m., Wednesday, June 16, 1993. All are doing well!

We also wish to congratulate Pat & Brian Mills on becoming first-time grandparents! Little Shelby Austin Mills (9 lbs., 1 oz.) arrived on June 8<sup>th</sup>, the first for Derek and Laura Lee Mills.

### May 24<sup>th</sup> Meeting:

Once again we had a strong turnout for our May meeting, though due to the inclement weather most TRs stayed home. A pleasant exception was our Prez's '62 Herald, all the way in from Perth! Derek & Isobel braved a maiden voyage after getting the Herald fixed up and on the road again (for those of you who don't know, the Herald sat unused for a few years until the previous owner sought a good

home for it). After milling in and around the Herald for a bit, we moved inside and got down to business.

## Milano Auto Body

*"Specializing in Frame Straightening"*

75 ABERDEEN STREET

OTTAWA, ONTARIO K1S 3J5

"Parking for 40 Cars outside and 20 inside"

SARO PANUCCIO

Telephone 238-4165

### British Car Council:

First order of business was whether or not the OVTC would join the ONTARIO BRITISH CAR COUNCIL. The Council, as I'd written about some issues ago, is an affiliation of car clubs from across the Province. It was formed to provide more inter-club contact as well as to concern itself with other automotive matters, such as the many rumoured changes in Ontario legislation detrimental to older & classic cars (emissions, insurance, etc.). A fee of \$35 is required of each club to have a say on the Council as well as to keep informed of the events of the Council. The motion to join was accepted by the majority of those in attendance. As correspondence trickles in, I'll be passing it on in future newsletters.

### Membership Reminders:

It's coming up on the time of year when many of us (myself included) are due for renewal. I'll be diligently looking for those who are at their 'final notice' stage and will be including a renewal form which can be sent to Dave Huddleson. This also gives you the opportunity to voice any concerns or beefs with the club in the questionnaire portion. We all want the OVTC to service its membership as best it can, so take the opportunity to fill out and



return the questionnaire with your renewal (particularly for those infrequent attendees to meetings - you still count to us!)

In addition to those of us who are already members, we'll be trying to boost membership by reaching out to those TR owners out there who haven't heard of our club. I've contacted the people at *Auto Trader* magazine, and they offer clubs free advertising in the back of their 'Old Car Trader' magazine. I'll shortly have a small advert ready for them, so it'll be appearing in the next issue or the one after that at the very latest. It was also discussed at the meeting regarding running an ad in the *Citizen* informing the people of Ottawa of us and how to get in touch. This had good success when we last did it 2-3 years ago (that's how I heard about the club at the time). Our membership is hovering in the low 60s, albeit we still have a large group of very active members, which is good to see. I think we have a lot to offer potential new members, so the trick is to make the initial contact!

#### Stowe Committee:

I know it's too early in summer to be thinking of fall events in most cases, but when it comes to Stowe and the British Invasion (BI), it's never too soon. I sent back the club questionnaire from the BI organizers regarding things as number of club vehicles attending, whether the club would be interested in having a Hospitality Tent where clubs could provide membership and other information for others, and so on.

I'd mentioned in the last newsletter that perhaps a committee be formed to handle the various small (though important) items involved with such an excursion. I'm pleased to say that Joe Lashley and Mike Stapleton kindly agreed to put their heads together and see to the necessary arrangements. I know that Lori and I had the time of our life last year, but so did the Lashleys and Stapletons, so they'll ensure that everything is sorted to perfection for those going. In a recent conversation with Joe, he reported that dinner reservations for both Friday and Saturday night have been made, with Saturday finding us at 'Mr. Pickwick's Pub'. Well done!!

I had called the 'Yodler' Motor Inn in Stowe a while ago to see about booking a number of rooms for the OVTC. All 8 of the rooms originally requested have been snapped up, but if anyone hasn't

already done so and wishes to join the convoy to Vermont this September, they should contact Joe (at 726-6724) or Mike (692-3695) a.s.a.p.

#### OVTC Grille Badges:

There was an overwhelming response to Clive Law's investigation into obtaining OVTC grille badges. Shortly after the May newsletter went out, Clive learned that the price would be reduced to \$35 from the original \$60, and that may have had a lot to do with it. At any rate, over 20 polished aluminum badges were ordered at the meeting alone, which further permitted the club to obtain from the manufacturer a further 4 badges cast in bronze. These will be used as club awards for future events. The grille badge will make a perfect topper for my car as it returns to the streets in the next short while. Thanks again to Clive and his 'enquiring mind'.

#### Raffle Winners for May:

Our ever-popular OVTC raffles continued in May, this time with a deluxe screwdriver set and a ratcheting wrench set on the block. First to go were the screwdrivers, and the winner drawn was Clive (it pays to buy the last ticket). The ratchet wrenches went to Craig Holbeche (I could've used those right now, believe me!!). A big Congratulations to the winners, and to those who didn't win, come on out it June and try again!

#### Tech talk: Hydraulics:

Brian Mills gave another fine technical presentation at the May meeting. The subject this time was brake and clutch system hydraulics - the 'vital fluids' of any TR. Brian brought along many examples of these components from his vast inventory to serve as demonstrators for his talk. No comments this time from the Ladies' Auxiliary about why Brian has so many spare parts (likely they were afraid of flying chalk!). The talk was very enlightening (which means I understood it a little better this time) as I'll be looking at these items closely as the TR6 makes its way back to life.

#### "Dr. Dale's Car Clinic":

Terry's choice of topic for this month seems very appropriate, as it continues with our theme of 'vital fluids'. It seems especially so since, after all,



what more common fluid to each and every motor vehicle than gasoline. Without further ado ...

*There are always questions and discussions on which gasoline is the best-suited for use in the older cars designed for use with leaded fuels.*

*First of all, let's look at the lead additive itself. Amongst the several reasons it was added to motor fuel was its ability to "attach" to the metal in the cylinder head that the exhaust and intake valves closed onto. This area is known as the valve 'seat' and could be metal of the cylinder head casting itself or a much harder metal inserted or fitted into that area. As the valve is slammed shut by the valve spring pressure, there is a high load imposed on both the valve and its seat. The pressure is exaggerated by the designed-in small surface area in actual contact - there intentionally to further ensure a complete closure with minimal or nil leakby.*

*This continual pounding will slowly erode both surfaces, allowing the valve to sit deeper into the head (or recede), which is one of the reasons you have to adjust your valve clearances. The lead used to provide a 'cushioning' effect which in turn allowed for longer valve life and less damage to the cylinder head. Lead, however, is not environmentally friendly and has been removed from use in paints, most batteries and gasoline. So, now what will you do?*

TERRY DALE'S

*The Old Car Factory*

24 Bentley Avenue, Nepean, Ontario K2E 6T8  
Phone / Fax 613-224-6913

Full Parts & Mechanical Service to  
CARS FROM THE 50's TO THE 90's

AUSTIN/MORRIS, MG, TRIUMPH, JAGUAR & LANDROVER

Authorized Distributors for: • Moss Motors • Interstate Batteries  
• "Double S" Stainless Exhausts  
• PHH Service Card Supplier

**"GOOD, HONEST, OLD-FASHIONED SERVICE"**

*For light-duty, low-mileage vehicles you probably don't have to do anything as this wearing process takes place over thousands of miles - that could mean 15-20 years before attention is needed in some cases. The permanent solution is to remove the cylinder head(s) and have a quality machine shop install hardened valve seats. While expensive, this should then last the life of the car.*

*In the meantime, one gasoline company is using an additive in all ranges of their products which is a one-for-one substitute for the now-banned lead. That company is Shell and documentation is available to support their claim. I have been advised that the premium Esso gasoline has the same additive but I don't have supporting documents to verify that. The main point is that you don't have to stop driving your older sporting classic until you have the cylinder work done. Moderate driving, along with the use of Shell gasoline, will let you enjoy it for thousands more miles!*

### Past Auto Events:

*First show of 1993 - Cornwall Can-Am. May 23.  
- by Juliano Benco.*

A quiet Sunday morning is rudely shattered by the sweet sound of Triumphs coming downshifting along my street. It is just past 8:00 (my neighbours must just love me).

8:45 - it's time to depart. Our caravan is made up of 8 cars, led by our trusty trailmaster, Sir Joseph of Lashley, who led us through the scenic backroads to **Conwall** (just a joke Clive!) and the Cornwall Can-Am Show. The weather was most accommodating that day. There was a large group of American iron present, ranging from early 1910 to late '60s. Some very beautiful cars were there to be seen and admired. The British group made up about 1/3 of the total cars. We would liked to have seen more, but for its first year, Andrew Grant did a fantastic job. The rock band is another story!

Again the OVTC has outshined all other clubs, in numbers and being just a fantastic group of people. The Morgan Club was pretty good considering some of their cars are half Triumph! By 2:30 we were on the road again, back to Ottawa. As usual through the kind hospitality of John & Evelyn Carr, the convoy landed on their doorstep for a brew. From there the group scattered in various directions, ending a very enjoyable day.

*Porsche and Jaguar Clubs - Andrew Haydon Park.*

Andy Haydon Park was again the location for the Porsche and Jaguar Clubs' annual Concours. The Porsche Club meet was held on Sunday, May 30<sup>th</sup>, while the Jag club met the following Saturday, June 5<sup>th</sup>. The Porsches had the benefit of better weather and had a larger turnout of both Porsches and

spectators, while the Jaguar meet suffered the cold and (eventually) rain that seemed all too familiar last year. While there were some gorgeous cars from both marques at these shows (I do like the Porsche 356s and, well, many of you know my feelings on E-Types!), the people there just don't have the same sort of involvement that owners of "working man's cars" like Triumphs seem to have. Salt-of-the-Earth, we are!

#### Upcoming Auto Events:

**Ottawa Classic Sportscar Show - Richmond, June 27.** This event, hosted by *Sporting Classics and Auto Restoration* magazine, has been a favourite for local enthusiasts since it began a couple of years ago. As the event will be out of doors, local clubs are permitted larger (25' by 25') display areas. We are looking for volunteers to 'person' (politically correct term) the booth. Interested parties can speak to Julio.

**VARAC Vintage Racing - Shannonville. July 3-4.**

I'm hoping the TR6 is ready in time for this one, as it would be a bit of a "homecoming" for me, as I hail from Belleville originally. There are always some interesting cars at this event (I remember a Ferrari 330 GTC years ago), plus some great vintage car & bike racing. Juliano again has further info.

#### Several TR7's For Sale:

I got a call from a Wayne O'Brien, who wished it known he was selling a total of five TR7's! There are a couple in good shape and a couple of rougher ones, but the details are best left for Wayne himself to explain. He can be reached either at work at 794-1725 or at home at 567-2715. He said \$9k takes the lot, but individual offers would be entertained.

#### Late-breaking News Items from Clive:

(They're "late-breaking" because I'd already run off copies of the first 2 sides. Ed.)

Firstly, to those people who ordered a grille badge from Clive at the last meeting, he'd like the balance of the payment for the June meeting. If you cannot attend, I'd advise you to contact Clive directly.

A second note is for David Moorhouse - Clive apologizes, but he wasn't able to set up the new 'OVERDRIVE' logo in time for this month's issue.

Lastly, **Want to see your car on our cover?** Clive asked me to make it known that if you have a favourite shot of you TR, feel free to submit it to he or myself for future Newsletter cover photos! Clive also said to say that each picture chosen will receive a full colour reproduction of the photo. Let's see your cars!

#### DIY Articles:

The first article offered this month is for those of you who weren't fortunate to hear Brian Mills' talk on brake & clutch hydraulics. The second article rounds out the discussion on motoring fluids by discussing the correct oil to use. Hope you find them useful.

#### FOR SALE:

The *Old Car Factory* is downsizing and has lots of stuff to clear, such as:

	List:	Sale:
→ TR6 Clutch Ass'y	\$169.99	\$125.00
→ TR2-4 Alloy Valve Cover	159.95	120.00
→ Lucas Driving Lights (pencil beam)	119.99	90.00
→ Lucas Driving Lights (rectangular)	149.99	95.00 pr.
→ TR6 amber park light lens	49.99	25.00
→ TR7/8 Frt strut gaiters	13.99	5.00 ea.
→ Nylon fuel line clips	1.20 ea	0.60 ea.
→ TR4-6 wheel cylinder installation kits	22.69	16.00 ea.
→ Spit. 1500 water pump	69.99	35.00
→ Lucas wing mirror	32.49	20.00
→ E-Zee bleed bleeder	22.69	10.00
→ Lucas wing mirror	32.49	20.00

#### Also: Used parts;

→ Spitfire doors	\$20.00 ea.
→ Spitfire trunk lid	20.00
→ TR6 rebuilt trans.	500.00
→ TR6 windshield frame	20.00
→ TR6 wood dash	35.00
→ TR7 differentials	200.00
→ TR8 fuel inj. system	200.00
→ TR7 wheels	5.00

#### Shop Equipment:

Hoffman electric hoist	2500.00
Allen scope	1500.00
Tire machine	600.00
Tire balancer	1800.00
Parts washer	250.00

"PLUS MUCH, MUCH MORE!!!"



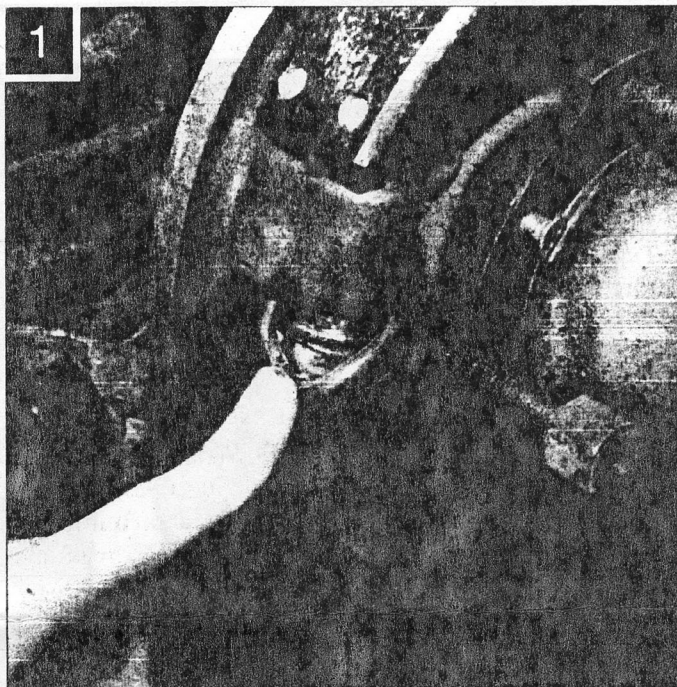
# BASICS FOR BEGINNERS

YOU DON'T HAVE TO BE BORN WITH A SPANNER IN YOUR HANDS TO DO A BIT OF DIY WORK ON YOUR CLASSIC CAR. WORKSHOP MANUALS RARELY

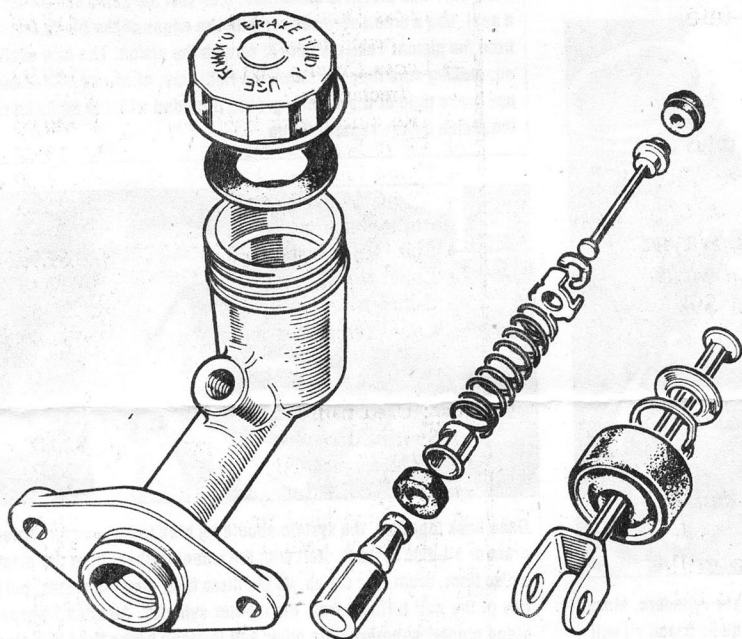
GO INTO ENOUGH DETAIL FOR THE BEGINNER, SO FOLLOW OUR NEW SERIES ON BASIC MAINTENANCE TASKS.

# START BRAKING

David Lillywhite demonstrates how to check and rebuild master and slave hydraulic brake cylinders.



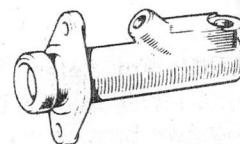
A typical slave cylinder, visible once the brake drum is removed. There shouldn't be any evidence of brake fluid under the outer dust cover or covers when they are pulled back. If there is, then you've found your leak. By getting an assistant to very carefully press the brake pedal, you will be able to see if the piston moves in the cylinder. A seized cylinder, like a leaking one, will need replacing or reconditioning.



Different types of master cylinder require slightly different methods for bleeding the brakes. Compare the body of your master cylinder with the diagrams, bearing in mind that there may be a fluid reservoir attached, which isn't illustrated. Except with a G-valve system, the handbrake should be released (chock the wheels first) and the brake adjusters wound back before bleeding.

**CV types:** Push the pedal down quickly through a full stroke, followed by three very quick half strokes, then lift the foot off the pedal so it returns quickly to its stop. Repeat this until no more air bubbles emerge from the pipe, then hold the pedal down while the nipple is tightened. **AS, TVCV and ASAS types:** push the pedal lightly down using a  $\frac{3}{4}$  stroke and return it slowly. Wait three or four seconds and repeat the pattern. End in the way described above. **G-valves:** Some Girling-equipped cars, such as the BLMC 1800 and some Peugeots have a G-valve which prevents the rear wheels locking up under hard braking. The front brakes of these cars should be bled by the CV technique, but the rears require the AS method, but with the handbrake applied. Always test the brakes by holding the pedal firmly down for two minutes, during which time the pedal should not compress. Then check all those joints that have been renewed or disturbed and test the car carefully on the road.

Fig 1



C.V. TYPE.

Fig 2



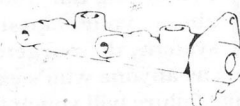
A.S. TYPE.

Fig 3



T.V.C.V. TYPE (tandem).

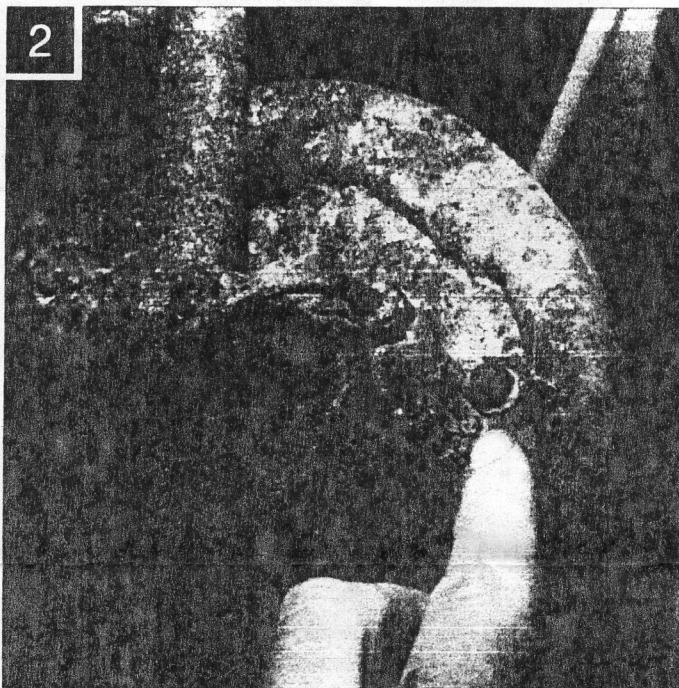
Fig 4



A.S.A.S. TYPE (tandem).

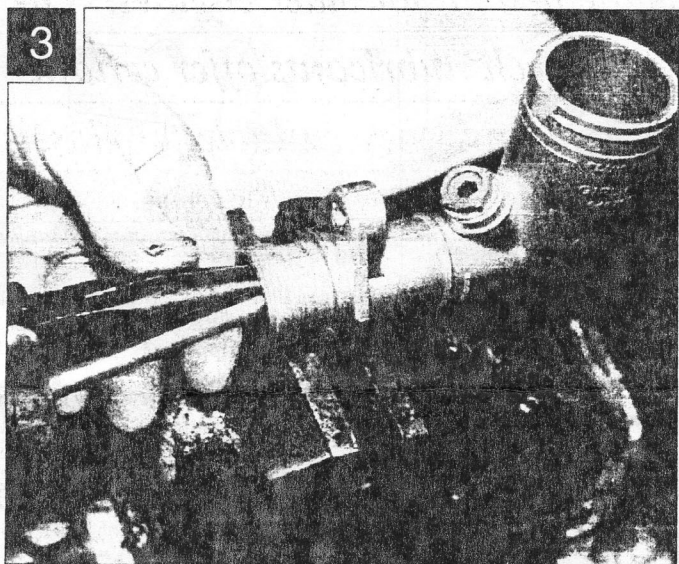


2



Slave cylinders may be fixed to the brake backplate with bolts, as shown, or with spring clips. Either way, the brake pipe will need removing - let the threaded union and any fixing bolts soak in penetrating oil for a few hours if possible before trying to remove them. The brake shoes and associated adjusting mechanisms will also need to be removed before taking the cylinder(s) off.

3



Master cylinders are more expensive to replace or repair than slave cylinders. Most are mounted on the engine bay bulkhead or under the driver's side floor and all will be connected either directly, or by a series of linkages, to the brake pedal. The fluid should be drained from a master cylinder before it is removed, preferably by attaching a pipe and clean glass jar to a front brake nipple, undoing the nipple and pumping the brake pedal until fluid stops coming out of the pipe.

4



Once removed, dismantling of both master and slave cylinders follows the same general pattern, but a master cylinder will be more complicated. Its piston is usually held in place by a large circlip in the end of the cylinder body which can be removed using long-nosed, or circlip, pliers. The piston should be withdrawn carefully, making note of which bits go where, and also the way in which the seals are fitted. There may be all manner of rubber seals, springs and washers floating about. This is the time to examine the bore of the cylinder and also the piston for any scratches or pitting - if such damage is evident the cylinder must be replaced or reconditioned by a specialist.

5



If the bore and piston is unmarked, then just the seals can be replaced. To remove a seal, use a small screwdriver with the edges of the blade rounded off, to prise it from the piston. Take care not to scratch the piston. The new seals can be stretched on, making sure they are round the right way, of course. Clean out the cylinder and use brake fluid or the special grease provided with the seals kit to lightly lubricate the piston before reassembling.

6



Once back together, the system should be bled to remove unwanted air. For an all-drum or all-disc system, start with the wheel farthest from the master cylinder. For a disc front, drum rear set-up, do the discs first, then the drums, but starting with the one of the pair furthest from the master cylinder. Attach a transparent tube to the bleed nipple, submerge the other end in clean brake fluid in a clean glass jar and undo the nipple half a turn. Get an assistant to push the brake using the appropriate technique described in the section on the previous page. Remember to pause while the pedal is down and the nipple closed, to top up the with fluid of the correct specification (see driver's handbook).

**F**eeeling spongy? Leaky seals? Presuming that you're talking about your classic's brake system, then urgent action is called for, as anyone who's experienced total brake failure will vouch for.

The rubber seals used in hydraulic brake cylinders eventually harden, losing their sealing properties in the process. If you're lucky, the

master cylinder will drop, the brake pedal may begin to feel spongy and there might even be tell-tale fluid stains visible. For a master cylinder these could show inside the car, on the carpet or the brake pedal itself. Fluid from a leaking wheel cylinder may run down onto the inside or outside of the wheel rim.

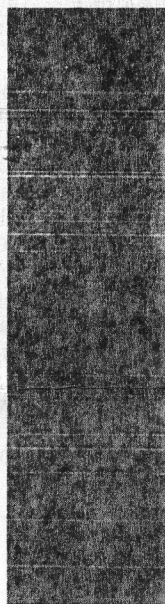
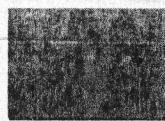
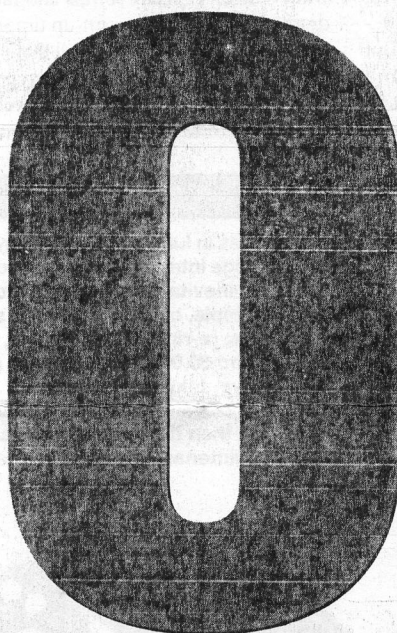
New seals are available for most cars, but to be safe, a cylinder with the slightest amount of

most cases doing that isn't the financial disaster that might be expected because replacement cylinders are usually cheap and easy to come by. But there are exceptions. Master cylinders for Austin A35s for example are notoriously expensive, and there are some models that spares have dried up for all together.

The solution is to have the part machined and resleeved by a specialist. This is quite expensive,



# CHOOSING THE RIGHT



**T**here was a time when the choice of engine oil was simple. During summer, an SAE40 grade would be used; this was then drained off around November and replaced with thin winter grade SAE20W. If one went racing, however, mineral-oil, the sort that comes out of the ground, was abandoned in favour of one from the vegetable kingdom.

Castor oil offered better engine protection under extreme conditions, due to its inherent natural stickiness. Unfortunately though, that same stickiness caused problems, making it unsuitable for popular use.

But today, there's a huge range of oils on offer, from the old monogrades, through a bewildering variety of mineral multigrades, to the latest synthetics. Are some of them better than others for classic cars? To answer that question, we have to learn something about oil itself.

In order to fulfil its primary function, lubricating oil has to be incredibly tenacious. Bearing surfaces, for example, are held apart purely by the strength of the oil film. Other parts, such as cam-followers, are subjected to scuffing - at a pressure of up to 90 tons per square inch. But engine oil also carries heat away from highly stressed areas, and it has to withstand that heat, plus the corrosive by-products of combustion, without deteriorating significantly.

This is a real problem for straight, unmodified mineral oil, which readily burns, and is unable to neutralise the water, acids and excess fuel that contaminate it inside the engine - limiting its useful life to just a thousand miles or so.

Work on special additives, to combat this kind of degeneration, started in the 1930s and received a boost during the war years. A chemical cocktail, initially consisting of anti-oxidants and anti-scuffing agents, was designed into the oil. The monograde mineral oils then in use were thereby fortified to the point where thinner grades could be safely specified - so manufacturers of the late 1940s were able to recommend SAE30 grade in summer, rather than the SAE40, or even 50 used hitherto.

It's worth clarifying some terminology here. The SAE system, evolved by the American Society of Automotive Engineers, measures the viscosity of oils and grades them accordingly. Thicker oil was checked at 100°C, while thin oil, intended for winter use and carrying the 'W' suffix, had its 'pourability' defined at 0°C. And the word straight simply means no additives - so these post-war fortified monogrades were no longer straight oils.

As yet, however, there were no detergent additives. A large carbon build-up still took place in the combustion chamber, while the remaining particles (mostly missed by primitive by-pass oil filters), eventually dropped to the bottom of the sump, forming a thick black

gunge. The arrival of Duckhams Q5500 multigrade, in 1951, was a real leap forward. Dual rated at SAE 10W/30, it was a thin winter oil, modified with viscosity index improvers (long chain polymers) to make it behave like a thicker summer grade at high temperature. This first year-round oil also contained detergent additives; detergent multigrades would soon be in general use - though not entirely trusted by the motoring public.

Detergency - the ability of an oil to keep an engine clean - wreaked havoc in old motors. The intention was that soft, ultra-fine particles of newly formed carbon, held in suspension, would travel safely through oilways, eventually to be drained off with the old oil - hence the reason for engine oil turning black - it merely

shows that it's doing its job. But when used for the very first time in dirty, high-mileage motors, detergent oils stripped off old carbon and created disastrous blockages.

A further drawback of these early multigrades was exposed once better roads allowed faster motoring: transient viscosity. The polymer additives actually got chopped up under stress - so, if the oil was worked too long and too hard, it tried to revert to its lighter base viscosity. Engine seizure on the M1 was a very real possibility.

Even fresh 10W/30 was found to be inadequate for these tougher conditions, and the oil companies, therefore developed 20W/40 and then 20W/50 grades. Viscosity improvers were made stronger, and the overall concentration of the various additives in engine oil steadily increased - but 20W/50 remained the standard grade for many years.

Then two things happened. Turbochargers came on the scene thereby

---

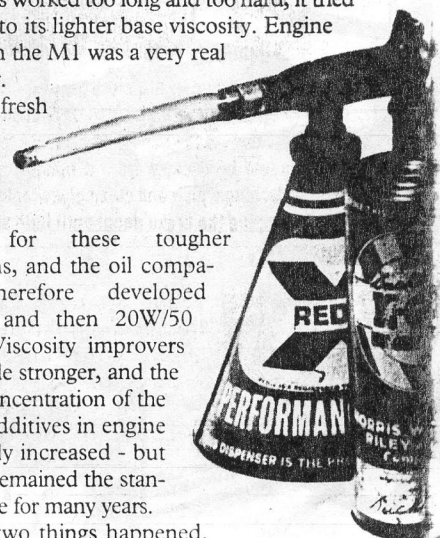
*Which is the best oil for older engines? The recent 'high-tech' lubricants offer certain advantages, but are they suitable for classic cars? David Landers investigates.*

---

## FLUSHING OIL

**Flushing out an engine, from time to time, used to be recommended to keep it clean internally. Modern oils make this unnecessary - but it's still worth considering in cases where a low detergency oil is used. Or if the car's just been bought, and you don't know how careful the last owner was about oil and filter changes. Paradoxically, though, flushing a really filthy engine may cause problems by precipitating blockages. Stripping and cleaning is the only safe remedy for the very worst cases.**

**Flushing oils are ultra thin, and not designed to be driven on. Drain the old oil when hot, refill with flushing oil, and run the engine at a fast tick-over for a specified length of time (usually five minutes or so). Drain and refill with normal oil. Fitting a new filter both before and after flushing would seem a sensible precaution.**





creating a whole new set of demands on the oil, and car makers were forced to meet stringent fuel consumption standards in the USA.

The new result, ironically, was a swing back to thinner oils, though to a far more exacting standard than before, and often using a new synthetic base. Synthetics, which are synthesised from gases, like butane rather than from oil, stay in grade better than conventional multigrades, and can cope with far higher temperatures. These thin oils, typically 10W/30 or 10W/40, created less internal drag than a 20W/50 - improving fuel consumption by around 5%. But the Society of Motor Manufacturers and Traders was sufficiently concerned to issue a statement in 1981, warning that they might not be suitable for older types of engine.

The reason is viscosity; confusing as that may be, when many of our old Drivers' Handbooks actually recommended 10W/30, in the 1950s, as an alternative to monograde SAE30. Yet 10W/30 wasn't a true substitute for SAE30, because the '30' viscosity was only achieved in the laboratory at one particular temperature - 100°C. As far as the engine was concerned (usually operating at around 70-80°C) the oil was nothing like an SAE30. 10W/30 was always marginal for such care; on today's roads, forget it. Some later classics will be able to use 10W/40

grade - where that was the original recommendation - but only if the engine is in peak condition.

Current car engines are very different from those of a generation or two back. Working temperatures are much higher, but more evenly controlled - thanks for computer-aided design/production methods and electronic engine management systems. Engineering tolerances are incredibly tight by former standards, while smaller capacity sumps and radiators have dramatically reduced warm-up time. A few litres of thin, highly fortified oil is all that's needed.

By comparison, most classic engines, particularly those exhibiting a degree of wear, require a thicker oil to take up wider clearances and to

obviate cold start lubrication problems. Castrol point out that 80% of wear actually takes place at cold-start, and that certain engines (eg some BMC designs) were susceptible to oil drainage away from the pump - thin oils may cause priming difficulties.

A fairly viscous oil will prevent the possibility of a 'dry start' - yet the oil shouldn't be so thick that it can't then circulate rapidly through a labyrinth of oilways. 20W/50 turns out to be ideal in the vast majority of cases - effectively ruling out synthetics, which are generally too thin for us.

**NEXT MONTH: Why some engines need monogrades.**

## THE WAY IT WAS

Advances in lubricant technology have reduced maintenance demands enormously. Longer oil-change intervals is the most obvious example - but many of the chores which were considered inevitable, when some of our cars were new, are now a thing of the past.

For example, cylinder head and sump removal every few thousand miles to remove carbon deposits; re-ringing the pistons, with oil-control rings, at perhaps 30,000. An engine which exceeded 60,000 miles without a rebore was thought to have done well.

Today, we take the longevity of those same engines for granted, which is fine - provided modern oils are used. If a traditional monograde, or a very low additive level multigrade is chosen, then the original oil-change intervals must be scrupulously observed and the old-time maintenance work accepted.

PHOTO: MARTYN BARNWELL



**OILS**  
SO TO-DAY

**DUCKHAMS**  
MULTIGRADE

LY  
VIG

BP  
SPECIAL  
ENERGOL

VISCO-STATIC  
MOTOR OIL

● Old oil cans from the James Baldwin collection of motoring by-gones.

## THE INDEPENDENTS

Petrol companies account for a high proportion of motor oil sales. But, in addition to the well-known independents, like Castrol and Duckhams, there are several other specialist lubricant producers - some of whom pre-date the dawn of motoring.

Morris & Co. of Shrewsbury, and Brett's Oils of Tyneside (the 'Ovoline' brand), are typical of these smaller companies. In addition to blending the latest high-tech synthetics, both

firms can supply a wide range of monogrades, and 20W/50 multigrades to a number of different specifications. They're also able to advise on your own particular lubrication needs.

Distribution is sometimes a problem, but if you have an old-established firm of this sort in your area - give them a ring. Buying in bulk could bring attractive discounts.