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EDITORIAL

Having stirred various prominent J.C.A. members to support the 'Javelin' with biros, I now find a surfeit of 'Valuable Data' on the Editorial desk.

At the risk of offending said members I will have to hold over some of these articles till next issue, as this issue would be too big (P.M.G. wise) if all was included, and I shall be too involved to put much time into the next 'Javelin'.

I discovered in the last issue that it is no good putting future meetings at the end of the Editorial, so I'll do it now before everybody gets bored stiff.

The next General meeting will be at Christ Church Hall, Wood Street, Hawthorn on **Friday 10th October**.

We are (Hon. Pres. is) attempting to get a film of the Appollo Space Flight, or some such, so members can have a little nap, instead of being kept awake as they were at the last general meeting. Those who didn't make it will be pleased to know that, due to lack of film or projector or operator or some such, Hon. Pres. and myself 'offered' to air our Jowett knowledge, by giving practical demonstrations, with the aid of the relevant parts and a blackboard, on the fitting of cylinder liners, using solid copper seals.

Modifications of the rear main bearing, using loose end float washers, etc., I guess half the members who didn't understand were bored stiff, and the others who did, had done it anyway.

We had a maximum crowd, except for Hon. Secretary who had picked up a bait and was ill, and Hon. Treasurer, who didn't know the meeting was on 'cause he doesn't read all my Editorial. (Bill, please note the above date!)

Morrie Dodd rang last night to say the 'News' was over-due, which I knew, and during the row he said it was time we had a Club Run, and named a date on which I couldn't come, which didn't matter as I rarely ever do, but he pointedly adjusted it for my benefit.

Therefore. I hereby announce the next - - -

TREASURE HUNT – BAR-BE – QUE – PICNIC.

On Sunday, 21st September, 1969.

Contestants will be slugged 50c. (to pay for prizes) and be required to bring their own chops and bangers, bottles, flagons etc., clues and the destination will be given, and the idea is to tootle along the route looking for clues and avoiding other cars until you lose interest and short cut it to the destination, thereby missing out on many 'valuable prizes'. We finish in the nearby hills with a guaranteed maximum mileage of 80 miles return. The start is at Chadstone Shopping Centre, Parking Area D6 and this post will be manned from 10.15 (starting time) until 11 a.m. Late starters will lose points.

Any queries should be directed at Hon. Pres. as organiser and ititiator.

Having got everybody into a frenzy of car washing and polishing, I should remind all of the M.G. Car Club's Concours d'Elegance in December sometime.

Last year we fielded 12 very creditable Javelins and aroused a great deal of interest among the motoring fraternity, who probably assumed us to be dead. Fortuneately, all Javelins look alike to the masses so we present a more uniform line up than many other worthy cars. Thought I'd bring this M.G. thing up early this year as it was such a good show last year, it would be a shame to miss it, thru lack of preparations. Just clean and polish the Jav. inside and out and add to the throng. Shall keep you posted.

If you need incentive to bring your Jav. up to scratch, The Jupiter Restoration Epic, by Mike Allfrey, should inspire one to at least get the dents knocked out; Mike and Sue brought the car from England with them, and it is the only going Jupiter in the Melbourne area as far as I know. Thanks for the article Mike.

Our research on crankshaft bearing materials has considerably advanced due to the efforts of Messrs. Willson and Creagh who both offered documents which are received with thanks.

Bill Pearson uncovered an Historical Article in a Regional Booklet, but I expect to hold this till next issue.

After my last chat with Eddie Wolf I received two articles in the mail, with the account of the V.W. Pistoned engine coming up in the future, after performance figures have been recorded. I gather this engine has run for some three years now without bursting so maybe V.W. Pistons are alright. Eddie, hope you don't mind if one or both your articles is held over till next issue.

Back to the 'Elegance' business, we have uncovered a very good motor trimmer in Templestowe, his name is Ken Hocking, 61 Parker St., Templestowe. He turns out a good job at a very reasonable price. As an example – Bill Fock had a standard front seat recovered in pleated 'Deerhide' for $20. material and labour.

If anybody needs seats re-trimmed, the idea would be to borrow a seat to use whilst yours is away.

Re tail light flashers: The small V.W. assemblies which fit a Javelin admirably are not available new and are replaced by the larger type which cost $10. each. Having bought a pair at this price, I then discovered Jap. ones the same at $5. each. Les Anderson found them at Bulk Auto Disposals, 479 Riversdale Road, Camberwell, Phone 82 7404. A fair bit of sheet metal has to be removed from them to fit the contour of the Jav. rear guard unless terrible things are done to the fuel filler, but anybody handy with the file and hacksaw should be able to make an acceptable job of it.

Don't forget the next General Meeting, 10th October,

Don't forget Morrie's Treasure Hunt thing, 21st September.

Don't forget the Elegance thing in December. And . . .

Don't forget photos for the next issue, which may be 'pictorial'.

Yours sincerely, J. D. Taylor, Hon. Editor. J.C.A.

ALUM. ALLOY CRANKSHAFT BEARINGS – By: Arthur Willson.

Advantages:

(l) Good corrosion resistance.

(2) Good load carrying capacity.

Re copper lead bearings, in some instances of heavily loaded bearings early failures were attributed to rough surface finish on bearings.

Composition:

Alum. Alloy.

90% Al. 6% tin. 4% other incl. Copper & Nickel.

Copper-Lead.

75% Copper. 24% Pc. 1% other.

Overlay.

87·5% Pc. 10·0 % Tin. 2·3% Copper.

Compatibility:

Bearing material v. Shaft Hardness.

Softest journal to be used with Alum alloy Bearings 200 - 500 Brinell. (if finish of journal 10 micro. Ins. or better). If finish 5 micro. Ins. or better, limiting hardness may be reduced slightly. If finish say 20 micro. Ins. limiting hardness is increased.

Incidently 'Clevite' bearings made in Cleveland USA have a copper PB bearing that seems to be superior to standard Copper PB type. Besides an overlay of 0·0006-in. PB. tin, copper (for superior surface action and embeddability) there is an intermediate layer of nickel, that increases overlay fatigue strength by preventing the tin (PB) in the overlay from migrating to the lining.

ON NUTS AND BOLTS AND THINGS – by Eddy Wolf.

There are many points on which Jowett cars can be praised and from time to time I have seen some pretty good arguments put forward in this newsletter. One point seems to have been neglected in all that praise, and that topic I intend to cover.

Quite a few of you have no doubt worked on other cars as well as Jowetts, and you have got to that aggravating discovery that all the spanners that you owned did not fit a particular nut. Has this happened to you on the Jowetts?

I once worked on a Morris, which because of it's English ancestry ought to be approached with a set of Whitworth spanners, but all to no avail, S.A.E. spanners were required for this and Whitworth for that, I got thoroughly disgusted in the end and used a shifting spanner.

Pick almost any bolt in the Jowett and it will be B.S.F. thread. Beauty, no trouble. If you are still with me, I now give you my sixpence worth on threads.

English cars for my money should have British threads, and that means B.S.W. – B.S.F. – B.S.P. or B.A. If you don't know what that means I'll explain. B.S.W. stands for BRITISH STANDARD WHITWORTH. so B.S.F. means B.S. FINE. B.S.P. means B.S. PIPE and B.A. stands for BRITISH ASSOCIATION. Any engineer will tell you that this multiplicity of threads is by no means the end. There are also special threads for brass, plastic, electrical and even bicycles, but we won't bother with them here.

One thing that a few of you have no doubt noticed, is that it is pretty difficult to buy B.S.F. spanners. The reason for this is simple, they don't make them as Whitworth spanners fit. For some reason of which I am not sure, somebody decided to make it difficult for everybody. You take a 3/16 Whit. spanner and it fits a ¼-in. B.S.F. nut. Now Who's nutty?

British bolts are measured across the diameter for width, and underneath the head for length. So if you have a ¼-in. dia. bolt you would think that a ¼-in. spanner fits, but of course you know all the time that you have to use a $^{3}/_{16}$-in. spanner. How silly of you to think otherwise.

Bolts made in the good ole U.S.A. come under the title S.A.E: N.F. and N.C. to pick a few. S.A.E. stands for Standard American Engineers; N.F. means National Fine (and it is in fact the same thread as S.A.E.) and N.C. means National Coarse. Just to be different the Yanks measure not the bolt dia. but the distance across the flats on the head of the bolt, hence the term on some spanners A.F. meaning Across Flats. This is one reason why two spanners both marked ½-in. do not fit the same bolt necessarily. One would mean designed for a ½-in. dia. and the other for a bolthead measuring ½-in. across the flats.

One real tricky size in the Jowett is the gearbox stud. Because they are so small (I used a $^{3}/_{16}$-in. Whit. spanner so they must be ¼-in. O.K.?) and they go into aluminium, some smart person decided to use a mixed thread (oh shame, oh shame). The end that pokes out is ¼-in. B.S.F. but the end that you can't normally see is ¼-in. Whit. That's just to prove that what I said above is wrong.

What I have always tried to maintain is to keep my engines with their original threads i.e. B.S.F. but this gets a little difficult after you have had it to bits a dozen times. The difficulty is not so much in maintaining the threads, as to stop the things from wobbling. The reason being, that with the threads being so fine in a soft material such as aluminium, a little of the aluminium keeps scraping off every time you screw up these naughty steel bolts.

One thing that I think the Club should invest in for its members, is a set of thread inserts that are available at the moment. These are a steel insert which replaces with the original size a stripped thread. The reason why I think the Club should invest in them is that I believe they are only available in complete sets at a hell of a price, and in such quantities that an individual member will never get to use them all. The way they work is by first enlarging the threaded hole to take the outside of the 'Helicoil' insert. A special tool is provided in the kit to thread the hole once it has reached the appropriate size. Once the enlarged hole has been threaded, the Helicoil is screwed in and the original thread is there once more with the added advantage that the bolts now screw into steel instead of into aluminium. If the Club bought such a Helicoil kit, they could charge the cost back easily to these members who are interested in maintaining their engines in the original state, engines would last longer and be easier to work on. What do you think?

RE-BIRTH OF JUPITER E0/SA/42R. – ENGLAND 1966 – 1968 – By Mike Allfrey

Unfortunately, when I acquired my Jupiter, body No. 7 chassis No. E0/SA/42R, I did not know how unique it already was without my numerous modifications. The car was in a very neglected state of repair so bad that every time it was driven over a modest hump the tail shaft struck the floor with a loud grating noise. Another trick was to fling the passenger door open when stopping at traffic lights in crowded towns. It was also getting increasingly difficult to fill up with petrol. Later, on removing the rear body section I found that the rubber hose, battery earth lead, rear bumper irons and faith were holding it on to the chassis frame.

National Jowett Day 1966, all those beautifully restored Jupiters and poor JKW 294 in such a sorry state. Straightaway I was inspired to do some restoration work, and then fate stepped in. I spotted Drummond Black's Javelin with Laycock de Normanville overdrive fitted in place of the centre bearing. Then I met Ken Braddock who suggested fitting a Rootes gearbox to get over the floor gear lever problems. Thus armed I returned and little did I know that in eighteen months I would still be at it, in fact I still am.

A friend offered me the use of his farm workshop for my restoration programme. In this workshop were gas and electric welders, compressor, grinder and drills. Wreckers yards were searched for 1956 Humber Hawks c/w overdrive, I found one and paid the equivalent of $12 for it. A new 1961 Sunbeam Rapier gearbox cost $26 including tail shaft.

Now, strength and durability were the prime consideration, consequently the car now weighs, probably, 3 cwt. more than it should.

First job was to acquire a bicycle to convey me from base to workshop, which was four miles and uphill. The overdrive unit was stripped and cleaned, new gaskets and electric solenoid fitted. The rear end of the Humber gearbox casting was cut through, to form a bearing housing, onto this a seal housing was bronze welded to hold an oil seal in line with the input shaft, concentric to within 0·005-in. When the casting was welded it became distorted along the machined surface, it had to be hand scraped, to make an oil tight joint with the front housing of the overdrive. The centre bearing brackets were cut from the chassis and gussets were welded to the front of the 'X' centre bracing. The overdrive is now sitting on rubber mountings from Standard, Morris and Humber engine mounts. An adaptor was machined, from a Humber synchromesh hub, to take the Layrub coupling from the Rapier gearbox tail shaft. Being an electrically operated unit a Lucas horn relay was fitted, in an easily accessible position as with all of Joe's accessories. The relay was wired to a simple flick type switch, the overdrive works on all four forward gears, it is fatal to use it in reverse. The Humber tail shaft was mated to the Jupiter pinion flange with a machined adaptor ring. The Jupiter speedometer drive cable screwed straight on to the Humber drive take-off, now 40 m.p.h. is registered when the car is in fact travelling at approximately 75 m.p.h.

The Rapier gear box was then offered up to the Jowett engine, shock!, the spigot shaft protruded l½-in. further than the Jowett spigot. I overcame this problem by making a ring out of l x ¼-in. flat mild steel bar, sandwiched between two ¼-in. mild steel plates. Each plate was drilled, one to fit the engine bell housing, the other to fit the gear box. The resulting welded assembly looks from the side like a very sturdy 'H' section. The clutch spline on the Rapier shaft was exactly the same as the spline in the Jowett clutch plate, the flywheel spigot

was ground to fit the Jowett flywheel bush. The rear mounting was cut from the chassis and a Humber Snipe gearbox mounting was slung between the side members and welded in place. A Rover '16' gear change was mated to the Rapier box, using two ex-army searchlight control universal joints, giving a precise movement. The gear lever is mounted directly above the overdrive and is adorned with a Jowett Car Club lapel badge set in the gear shift knob. The gearbox was coupled to the overdrive by a short prop shaft.

Owing to the fact that the gearbox was higher because of the remote gear change in lieu of the column change, the rack and pinion steering unit had to be raised 4⅜-in. I could not afford to lower the engine in the chassis because I have already holed the sump on one occasion. Eventually the problem was overcome by mounting the rack and pinion in a fabricated unit just below the top front suspension crossmember. Two adaptors carry the steering rods in exactly the same position as when the rack was in its original mounting. Five inches were cut out of the steering column and precision universal joints were used giving very direct steering.

This Jupiter was unique in that it was one of the only ones fitted with those dreadful hydro-mechanical brakes, and, they were just not good enough. A bigger capacity master cylinder from a Talbot '90' was fitted where the electric petrol pump used to be. It was coupled to the foot pedal by a system of levers designed to reduce the amount of pressure required to stop the car. The front brake back plates were extensively drilled, and large aluminium air scoops were fitted. At the rear end an Austin A40 (Farina) slave cylinder was mounted so that it operated the rods to the rear brakes, a Rover '16' hand brake assembly using the Jowett cable. This set up showed a performance of 93% efficiency when checked by a police deceleration meter, and the Sergent's comment:- "Perfect mechanically Sir". The brakes at the wheels have been replaced by the full hydraulic type, mainly to ease the spares situation, with shipment to Australia imminent, they are still excellent.

M.G. Magnette shock absorbers were mounted on the outside of the front suspension wishbones, in an attempt to get a longer stroke and I reasoned, more effective damping. I finally achieved this by adding the Jowett type shockers within the wishbones, although this system has given trouble here on Australian mountain roads.

Up till now the engine was untouched, only a complete new clutch being fitted. A modified operating rod was made using ball joints from Hillman Minx gear changes. The chassis was then stripped and cleaned. A frame was fabricated to mount the floor on, this was mounted at eight points on the chassis. The floor frame was carried forward and up to the bottom of the dash panel to give some support and reduce 'scuttle shake'. Anyone who has driven a Jupiter will know what this is. The whole frame was fabricated from 12 s.w.g. 1 x 1-in. square mild steel tube and insulated from the chassis by ¼-in. nylon pads. A tunnel to cover the overdrive was built from Morris '8' and prewar Austin '7' transmission tunnels, a Ford Anglia '105E' gear lever boot was also used. At this time I decided that, as winter was fast approaching, a Ford Cortina fresh air heater would sit very nicely on top of the bulkhead and cover some rust holes, this has turned out to be one of the most effective modifications. The petrol pump was fitted alongside the left hand side of the overdrive, and an A.C. paper element diesel fuel filter was inserted into the petrol line, the pump can be isolated by a switch on the dash panel. Warning lights have been wired to the oil pressure, ignition, overdrive, direction flashers, heater, fog lights and brake lights.

A year previously I had seen a blue Jupiter in a wrecker's yard, one hundred and fifty miles away, while I was on field test work. I approached the proprietor about it, and told him the Club would be interested, he promised not to sell it to anyone but a 'fully paid up member of the J.C.C,' He was a Scotsman! Twelve months later I was field testing in the same area and decided to pay the Scotsman a visit, to find out what happened to the blue Jupiter, it was not in the yard. There it was, stored in a dry shed and I was charged $36·00 for it. Now the problem was – how to get it home. I borrowed a truck, loaded it on and so now I had two nonrunning Jupiters.

It was soon evident that No. 2's body was, in some ways, in better condition than No. 1. even though it had no body mountings left. Both rear body sections were measured, but no measurements tied up. I made some rear mountings out of 12 s.w.g. mild steel and welded them to the body frame in a position I hoped would line up with the brackets on the chassis. The body was then painted and undersealed underneath. When the rear body was lowered onto the chassis the bolt holes lined up perfectly and, when welded to the floor frame formed a very solid structure. Two sills were pressed out of 16 s.w.g. deep-draw steel and were then welded in between the centre section and the rear end. The rusted lower part of the centre section was cut out, new panels of 16 s.w.g. were welded in to form strong box sections.

The doors were the next job to be undertaken, I started work on the pair off No. 2. until I was ready to fit them. Then I discovered that they were ½-in. longer; then it dawned on me, Jupiters, bless them, were hand made. I rebuilt the original doors in double quick time and fitted them using Morris Mini door hinges, it took me three

evenings to make those doors close neatly with No. 2. rear end: The trafficator apertures were filled in and welded up.

Two pieces of ½-in. plywood were used for the floor, along with some interesting material found in a scrap yard. Apparently it came out of British Rail refrigerator rolling stock, it was coated with a white plastic on one side and plated on the other, this steel sheet was 18 s.w.g. There has been absolutely no sign of rust or corrosion since, and if anyone can identify it I would be pleased. A centre console was built up to the dash panel, this is the location of the heater controls. The competition Javelin oil radiator was suspended from the front bumper on rubber mountings and hidden behind a small grille.

Work done on the bonnet assembly involved a great deal of straightening and strengthening. Two Riley Pathfinder fog lights were built into the front where two holes existed. An anodised aluminium grille from an Austin A60 was cut into three pieces fit the cooling air intakes. The windscreen was then removed and paint stripping began, three gallons of stripper and a very sore pair of hands later, every scrap of paint was removed. Colours chosen were Rover Pine Green for the body and finally Rolls Royce Shell Grey for the wheels and accessories. On examining the bare aluminium body panels, it was noted that each panel was made up out of several welded together pieces. The centre section of the bonnet was made up out of no less that seven panels, there is a beautiful run of weld right down the centre, underneath the chrome strip. The body was then prepared for spraying, first on was a coat of etching primer to seal the aluminium prior to undercoating and gloss paint. All spraying was done in sub zero weather conditions, it is remarkable how it shines when polished. Work now became feverish because divorce was rearing its ugly head; my deadline was Christmas, and it was late November already. All panels were bolted together using new plastic wing piping. Lights were fitted and focussed, the windscreen off No. 2. required ½-in. removed from the centre to make it fit snugly across the bulkhead, more evidence of a hand built car, I managed to get it mounted in a reasonable manner.

The London Trimming Co., were contacted about a new hood, they wanted the old one as a pattern, so I sent them the tattered remains, and in a few days a new hood arrived, all credits to them for doing a fine job.

Two days before Christmas, two very flat batteries were charged and the engine fired up, first three then four cylinders running rather smoky. The Ministry of Transport roadworthy test was passed with flying colours, registered and insured. The new JKW 294 registration plates were screwed on and two new Volkswagen 6-v batteries fitted; the open road was calling. The first run was to Bristol, 150 miles, and what an experience. The gear box worked well and the overdrive is still like a new toy, it has made a vast difference to the petrol bill. That first trip was in freezing weather, no hood, no windows but the heater was belching out tons of hot air, and my marriage was saved.

Over the next few months the trim was fitted, and green carpet fitted to the floor. Two separate seats were bolted in, the backs from an M.G. ‘A’ and the cushions were hand sewn by my wife Sue out of leather from a Rover ‘90’. Sue also made two sets of tartan seat covers. The chrome strip on the bonnet is ex-Morris Oxford and the two darts over the headlamps from a 2·4 Jaguar.

The ‘OVERDRIVE’ motif on the spare wheel door is from a Triumph 2000, people have been heard to remark; ‘What sort of car is that?’ “Oh, it’s an Overdrive”, “Who makes them?” “Those Germans whot make those funny air cooled cars”.

The engine now demanded immediate attention because it did not like the extra 3 c.w.t. to pull along, and the higher gearing brought on by the overdrive. I pulled the engine out of No. 2. and stripped it right down. George Mitchell received a fat order for – new Laystall crank, pistons, liners, valves etc. The ports in the heads were mildly opened out and 0·065-in. machined from the surface of the cylinder heads to raise the compression ratio. A timing chain tensioner was made and it is externally adjustable, it is noisy, and an hydraulic tensioner is being contemplated. This engine is now running very sweetly and has enough compression to bend the starter spindle, by the way, I have overcome the moving ring gear. Tack weld it with Eutectic 680 weld rod.

Now the hood had to be fitted, all the woodwork was replaced, and whoever designed the frame must have been a genius, because there is not one right angle in it, even the hinges are off square. The hood was then fitted and it was much easier than expected. We now have a 16 mile range before the leaks start on a wet day.

Over 7,000 miles are now on the clock, and I feel that I have a car that is unique, and a delight to drive. But never again . . . although I have offered to help Doug Anderson with his Jupiter, now he has finished polishing his chassis! Seriously, I believe that when his Jupiter is finished, it will look much better than my ear, Doug is much more thorough than me.

SUI GENERIS JUPITER.

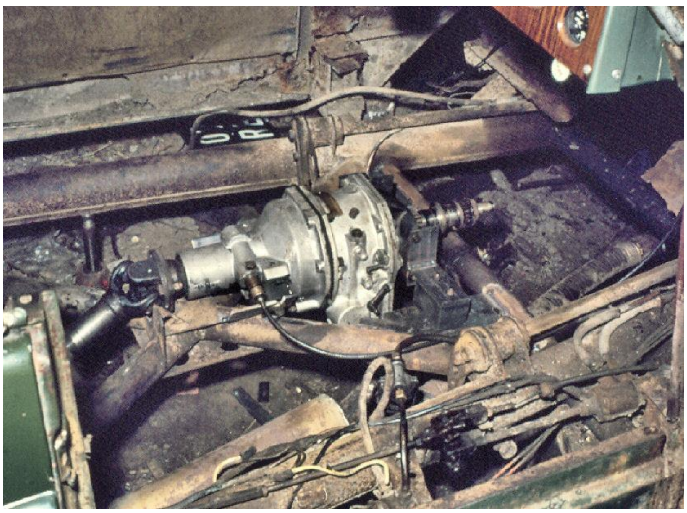
CARS FOR SALE

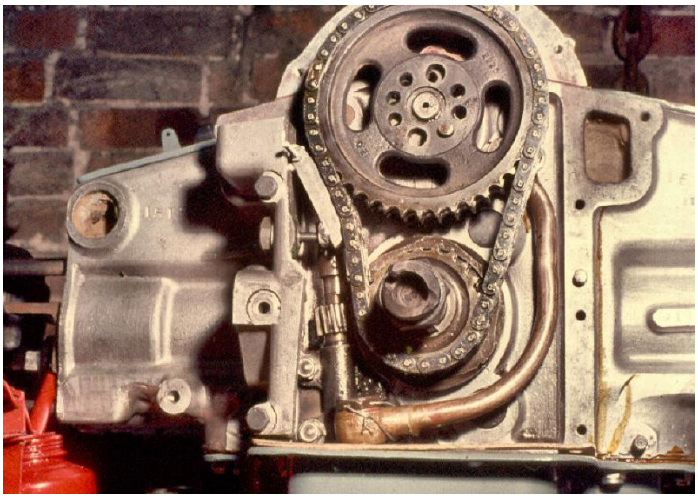
1951 P.C. De Luxe. 30,000 miles. V.G. condition, inside and out. Pale Green. $475.00.
Mr. McColl. 55 Ursa St., Nth. Balwyn. Phone. 85 5198.

1951 P.C. Standard. 50,000 miles. Uphol. & Duco. Good. Tyres O.K., l owner.
Mr. G. Ely, 42 Aquila St., Nth. Balwyn.
Price on application to above.

Addendum (Added):

RE-BIRTH OF JUPITER E0/SA/42R – PHOTOGRAPHS





Top Left: Overdrive being installed, illustrates rust affected chassis and body frame.

Top Right: Setting up the timing chain tensioner.

Lower Left: Illustrating the centre console which supported upper dash assembly to prevent ‘shakes’.

Lower Right: Modified overdrive with extended front housing to increase oil quantity, with Rover remote gear change. The overdrive finished up in a Bolwell.
