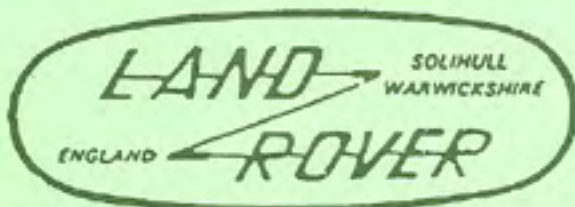


SERIES



TWO

CLUB

**BUMPER
CHRISTMAS
EDITION**

MAGAZINE
DECEMBER 1993

FROM THE ARCHIVES
CLASSIFIEDS
TECH TALK
FBHVC NEWS
SHOP WINDOW
MEMBERS' LETTERS
EVENTS CALENDAR



SWB FULL TILT, BELONGING TO Mrs M. BASS, ESSEX



Federation of British Historic Vehicle Clubs



SERIES TWO CLUB

P.O. BOX 1750, BRIDPORT, DORSET. DT6 5YJ

ASSOCIATION OF ROVER CLUBS
FEDERATION OF BRITISH HISTORIC VEHICLE CLUBS
D.V.L.A. RECOGNISED CLUB



4x4 Land-Rover—truck cab

CLUB SHOP
1494 ABHTON OLD ROAD
MANCHESTER M11 1HL



Regular Land-Rover—hard top

CHAIRMAN
SECRETARY
TREASURER
EDITOR
TECHNICAL OFFICER
EVENTS SECRETARY
EVENTS CO-ORDINATOR (RAC LAISON)
SHOP MANAGER
DISPLAYS & POST
'CONSTRUCTION & USE' LEGAL ADVICE

ROSS FLOYD
FRANK MYATT
JERRY BRIGHT
PETER LAMB
GORDON LORD
STEVE ASHTON
PAUL HANBURY
PAUL THOMPSON
DAVID LOCKYER
DAVID DUTTON

IF YOU WISH TO CONTACT THE ABOVE, PLEASE WRITE TO THE P.O. BOX ADDRESS.

BRANCHES

SOUTH WEST	PETER LAMB	0884 256484
SOUTH EAST	JO COTTON	081 840 2462
SEVERN SIDE	SIMON & JUANITA GLASS	0749 675425
MIDLANDS	HELEN LIPPITT	0905 427966
NORTHERN	ROGER HORNE	0298 83328

GET IN TOUCH WITH YOUR LOCAL ORGANISER - FIND OUT WHAT'S GOING ON!

NEWSLETTER: WE WELCOME CONTRIBUTIONS OF ALL TYPES, EITHER PHOTOGRAPHS, STORIES OR ARTICLES ON ANY SUBJECT RELATING TO LAND ROVERS AND OFF ROAD DRIVING. ARTICLES SHOULD BE ORIGINAL AND NOT SUBJECT TO COPYRIGHT.

IMPORTANT: PARTICIPATION AT ANY EVENT OR SHOW IS AT YOUR OWN RISK. WHILE THE CLUB IS HAPPY TO DRAW ATTENTION TO EVENTS WHICH MAY BE SUITABLE, ARRANGEMENTS ARE MADE DIRECTLY WITH THE LANDOWNERS OR ORGANISERS EVEN IF THE CLUB FORWARDS APPLICATIONS AND PASSES INFORMATION WE DO NOT ACT AS AGENTS FOR THE ORGANISERS. IT IS A CONDITION OF MEMBERSHIP OF THE CLUB AND PARTICIPATION IN ANY EVENT THAT THE VEHICLE OWNER, DRIVER AND ALL PASSENGERS ARE COVERED BY THIRD PARTY INSURANCE AND THAT THEY AGREE TO ABSOLVE AND INDEMNIFY THE CLUB, ITS OFFICERS, DIRECTORS, OFFICIALS AND MEMBERS AGAINST ANY LIABILITY HOWEVER OCCASIONED. THIS IS PARTICULARLY IMPORTANT IF YOU PARTICIPATE IN OFF HIGHWAY DRIVING WHICH MAY, BY ITS VERY NATURE LEAD TO DAMAGE TO A VEHICLE. IT IS A CONDITION OF PARTICIPATION IN OFF ROAD EVENTS ORGANISED UNDER THE NAME OF THE CLUB THAT NO MEMBER OR PASSENGER WILL CLAIM AGAINST ANY OTHER PARTICIPANT IN THE EVENT, ORGANISER OR LANDOWNER. WE STRONGLY ADVISE YOU TO CHECK THAT YOUR INSURANCE COVERS OFF ROAD DRIVING AND THAT YOUR INSURANCE COMPANY IS AWARE OF THE MAXIMUM NUMBER OF SEATS IN YOUR VEHICLE. THE FACT THAT A VEHICLE IS ACCEPTED FOR AN EVENT DOES NOT MEAN THAT IT IS IN SOUND CONDITION.

YOU ARE REMINDED THAT STATEMENTS AND OPINIONS EXPRESSED IN THIS NEWSLETTER AND OTHER PUBLICATIONS ARE NOT NECESSARILY THOSE OF THE CLUB OR COMMITTEE. YOU ARE STRONGLY ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF DATA, ADVICE OR METHODS BEFORE ACTING UPON THEM, PARTICULARLY WHERE SAFETY, FINANCE OR LEGISLATION ARE CONCERNED. THE CLUB, COMMITTEE, DIRECTORS AND CONTRIBUTORS ARE ALL AMATEURS AND DO NOT ACCEPT RESPONSIBILITY FOR ANY ACCIDENT, INJURY OR DAMAGE RESULTING FROM AN ERROR, OR OMISSION GIVEN IN THIS NEWSLETTER, OTHER PUBLICATIONS BY LETTER OR WORD OF MOUTH. YOU SHOULD NOT EXPECT THE STANDARD OF ADVICE OR SERVICE AVAILABLE FROM A COMMERCIAL OR PROFESSIONAL ORGANISATION.

THE CONTENT OF THIS NEWSLETTER IS COPYRIGHT.

SERIES 2 CLUB LTD. COMPANY LIMITED BY GUARANTEE. DIRECTORS: FRANK MYATT (SEC), JERRY BRIGHT, GORDON LORD, ROGER HORNE, PAUL THOMPSON, JO COTTON. REGISTERED IN ENGLAND NO. 2451020. REG OFFICE 2 BROCKLEY END COTTAGE, CLEEVE, AVON. BS19 4PP.

COPY DEADLINE FOR NEXT ISSUE..... 31st Jan 1994

Contents

Page 4.....	F.B.H.V.C: News.	News on Diesel MOT's.
Page 5.....	Members Letters	Includes an African trip and Stateside 2's
Page 12.....	From the Archives	Rare implements and attachments.
Page 13.....	Tech Talk	MOT checks, and Diesel conversions.
Page 28.....	Out & About	More rare Rovers.
Page 29.....	Events News	News from the regional groups.
Page 32.....	Classified Ads.	Vehicles and spares for sale
Page 33.....	Club Calendar '94	Whats on in '94.
Page 34.....	Club Shop	still time for some Christmas shopping !
Page 35.....	Classified Ads.	trade advertisers.

Editorial

As another busy Club year draws to a close its natural to reflect over the past year. A year when many changes and hopefully improvements have been made. 1994 looks like being an exciting year already, with moves afoot to try and donate a Series 2 for use by the Game Wardens who patrol the Savanna guarding against Ivory poachers. I'm sure many of you will have seen the way the Elephant population has been significantly affected by this illegal trade. It is early days yet, but the South east Group are currently exploring the possibilities. More news of this in later issues. There are also one or two other major projects currently under discussion, which unfortunately have not yet reached the stage where I am able to go into detail. Watch this space !, as they say.

On the subject of events, the Severnside group are organising a trip around the Avon Rubber Company's factory in Wiltshire. This will take place early in the new year (date yet to be arranged). Places will be on a first come first served basis. Contact Juanita Glass (via Club address) for details, stating whether you would prefer a daytime or evening trip.

Please remember to use the new Club address when replying as the old PO Box number will soon be assigned to a PO collecting box, and will only be emptied occasionally.

The close of 1993 happens to coincide with a change of Magazine Editor, this will be my last issue before handing over the reins. I have thoroughly enjoyed my time in the four years in the post, and still feel the sense of privilege that I had when I took it over. However all good things must come to an end, as they say, and I feel it is time that I handed it over for another period of evolution. My slight sadness is tempered by the fact that I'm sure it will be in safe hands with Eddie Wood from the Northern Branch. I have seen some of Eddie's work, and as you will see from the March '94 issue, Eddie works to a very high standard. This will free some extra time to spend with the South West Branch in '94. So I hope to see even more South West members next year.

This leaves three things to mention before I lose my editorial prerogative. Firstly, a happy Christmas and a great new year to everyone, hope to see you in '94. Congratulations to Steve and Kaye Ashton on the arrival of baby Ella, in September. I hope she is a signed up member by now !!. Finally a big thankyou to everyone, including all the Committee members past and present and everyone else who has contributed to the Newsletter in the past years, and made it such a happy and interesting time for me. In the interests of fairness I am not going to mention names, you know who you are, the only name I will mention is that of Rose my wife, without whose help, most issues would have been published very late, if at all !!.

Peter Lamb



MoT TESTS FOR DIESEL CARS & VANS

The plea for information to help us to comment both about the method of testing and the standards to be set before the smoke emission test (described in the last issue) is re-introduced seems to have been missed by most save The London Vintage Taxi Association which went to some trouble to obtain sample figures for us. As said before - no help or no information - no case.

If your Club has light diesel engined vehicles, please read the item in the last issue and do something - unless, of course, you are happy to see a test reintroduced which requires operation of the engine for several seconds at full throttle with no load.

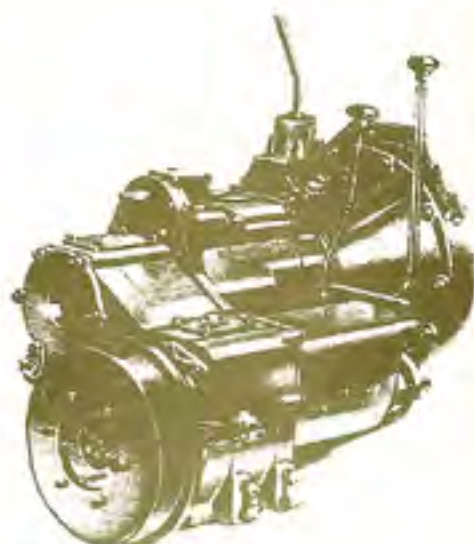
MoT TESTS IN UNITED KINGDOM

Some owners who have gone to licence their cars at Vehicle Registration Offices have been wrongly told that vehicles qualifying for the reduced rates of Vehicle Excise Duty do not require to pass the MoT Test. Before anyone thinks of taking advantage of this quite erroneous information they should, perhaps, tell their insurers what they are doing. Appropriate action should have been taken by now by Swansea, but we would appreciate details of continuing problems.

SEAT BELTS

There has been no further news about the proposed legislation to require the restraint of children in the front seats of all vehicles, irrespective of age or design. Our representations pointing out the problems were sent to government in November last year (*Report in issue 15*).

There have been reports of continental police (particularly Belgian) questioning the use of older vehicles without seat belts. They seem to be prepared to be aware that there is a Community Directive on the subject, but it might be as well to jot down on the back of your green card the reference to Council Directive 91/671/EEC where Article 2 states that this Directive on the approximation of the laws of the Member States relating to compulsory use of safety belts in vehicles of less than 3.5 tonnes only applies "provided the occupied seats are fitted with such equipment". Which seats are required to be so fitted is a longer story but should not affect vehicles of interest to subscriber organisations.



Regular Land-Rover canvas top



Long Wheel Base canvas top



Long Land-Rover truck cab.

Information on a few more products and services has been received by the Club office and are listed below. But remember that inclusion in the list does not constitute recommendation or endorsement by the Club or any of its members, but are for general information for members.

SLD Security & Communication are offering an alarm system which involves the use of a small pager which alerts the owner if the car is tampered with. Prices are around £135 +vat. They can be contacted on 0483 714990. (Woking Surrey).

David Harvey of Crowthorne, Berks has a small business specialising in the machining of prototype components, with regard to the manufacture or modification of obsolete parts. All aspects of turning, milling, grinding, drilling and injection moulding in plastic and rubber compounds for small run items. Rates are described as 'very competitive'. Contact David on 0334 776392.

Engine rebuilding and restoration is undertaken by Tony Parsfield of Marden Kent. Apparently this company is the only approved engine builder for the Honda CRX Race Series. Full machining and balancing facilities are available in the extensive workshops. Tel. 0622 832936 or 0638 510726.

Walsh Diesels, of Foleshill Coventry are engine and gearbox remanufacturers. They list a range of Land Rover petrol and diesel engines and gearboxes. As a price example they include a 3 bearing diesel complete with fuel system for £830.00 + vat exchange. They can be contacted on 0203 687092 or 0203 687241.

**'Old Faithful'**

Brian Watts

After seeing the article about Henry Edwards LWB in the September issue I thought I would tell you about my 'old friend'. It is a 1968 SWB 2A petrol. Bought as a cab and 3/4 tilt for £901.

Some years later I converted her to an estate with a hardtop with side windows and rear door. I have also changed the diffs for 3.9 Rover 3 litre ones. These were £15 each before the days when this became a popular modification and old Rovers became scarce. This is a very effective modification as the vehicle runs more quietly and it also improves fuel consumption from 17-18mpg to 20-22mpg. 13mpg was achieved in France this year on holiday, covering 1200 miles in all. My latest modification is to fit 11" front brakes from an ex-Gulf war LWB.

The vehicle is still used daily and pulls our 13ft caravan on weekend trips.

She has done 188,000 miles so far. At 167,000 miles the engine has developed a nasty knock, so a secondhand replacement was acquired. It was re-bored as water had marked the bores.

Looking up my records:- Petrol £2 10s (£2.50) for 9 gallons.
Spark Plugs 5/- (25p) each.

A basic Land Rover 88" was £740.00. The good old days !.

Back from the brink.

John Mace.

For many years prior to 1977, a Land Rover had always been high on my agenda to acquire as soon as funds allowed. So in August of that year, I purchased a rather battered ten year old Series 2A, which had worked very hard in its youth but never the less was complete and running, - just!. the petrol engine was very worn indeed, and to my horror returned only 12 miles to the gallon. I decided that this state of affairs could not continue, so after many weeks of searching, found a BMC 2.2 litre diesel engine, and with the conversion kit, fitted it with little real trouble. This served me well for over ten years, when a core plug blew out on the road. The engine had to come out of course as the plug had come from the back of the block. While out the engine was completely rebuilt and reconditioned.

It now runs very nicely, returning about 25 mpg. I very much enjoy driving the vehicle, but these days with so much traffic about, in this area anyway, the speed of 40-45 mph is rather slow and cars are liable to try and overtake in dangerous places which rather spoils the driving pleasure. The engine will of course run faster, but I have an 'ear' for engines, and realise their happiest running speed.

Thanks again !!

Stephen Downing

Just a short note to thank you to everyone to everyone who attended the Barbecue at Billing and for making it such a successful event;- and thanks to everyone who helped at the same event, (far too many to mention). Everyone mucked in so much, it was just like a family do !. I haven't seen Carols flan recipe yet Steve, let alone tasted it. But I'm sure my successor will publish it
A.S.A.P., Ed.

Paris - Peking Defender 110.

David Dutton.

The white Defender in the photograph appeared at our local Land Rover dealers, (Lookers, Hadleigh) with a price tag of £12,000, it looked new but had kilometres on the clock, and



all the extras shown in the photo. The Paris - Peking rally was cancelled in 1991 due to political changes in eastern Europe, so as a result of this Land Rover had a number of vehicles surplus to requirements, so they went out to the dealers. As far as I know they all had Solihull registrations as issued to Land Rover Ltd, DAC series. This vehicle was a standard 110 station wagon TDI, with the basic plastic interior. The vehicle was however fitted with, heavy duty suspension, which included a 4 pinion differential and HD half-shafts, an exterior front roll cage, driving lamps mounted on the bull-bar and a raised air-intake. The vehicle was soon sold to a local photographic business and has now lost its DAC number, gained a full length roofrack and lots of other 'posy' bits and pieces, which is a shame for a vehicle which has a history already in its life.

Better late than never !.

Ed.

While rummaging through the material for this issue I came across a fax from Ross, which unfortunately had been buried under some other material. It was a request to publish the following:- Congratulations Stuart and Sarah Gray of Sneinton, Notts, on the arrival of their baby daughter FRANCES. Apologies on my part to Stuart and Sarah, there is no date on the fax but I think it arrived around the time of the Club barbecue.

NADA (North American Dollar Area) 109".

Grant Ring

After the appearance in LRO magazine of the article concerning the above vehicles, which were Land Rover Ltd's attempt to get a foot hold for the 'under-powered' Land Rover in the United States, you may find the accompanying Land Rover ad interesting, which appeared in American car mags around 1965. Unfortunately the copy I have is so poor, as you can see, the text is reproduced below. From the top. The caption under the photo reads, "Land Rover 109 Station Wagon with heat-shield roof".



"1. Except for rattles, I am against silence in a car, writes John Steinbeck, a Land Rover enthusiast, and I don't know a driver who doesn't want to hear his engine.
2. If this is so, then you may like the Land Rover very much indeed.
3. Our 4 wheel drive (8 forward speeds, 2 reverse) masterpiece is not mousey. Its throaty authority is assuring in times of stress; which nowadays is usually.
4. Nor is this claim true only at 60 miles an hour. A Land Rover is more conspicuous even when it is standing still. With the ignition off.
5. The Land Rover stands nearly 7 feet tall. All its features lead to heroic proportions. 6. Therefore, when driving, you will simply loom over traffic which had previously scared the devil out of you.
7. This is not only safe and enjoyable, but you will observe how other drivers, awe-inspired by the Land Rover's casual might, yield in deference.
8. (Small wonder that women are enormously fond of driving Land Rovers. The easy command of such massive manoeuvrable masculinity is heady stuff.)
9. You may have read tests where imported cars fared badly in collisions. It's a pity we weren't there to help out the side. The Land Rover is built to resist the charge of a bull Rhinoceros, or a bull Lincoln for that matter.
10. The Land Rover's sturdiness of construction (the underside resembles the reinforced section of a railway track) makes it ideal for trackless wastes, car pools of small children, wretched ordeals et cetera.
11. There are perhaps 14 Land Rover hardy perennials ranging from Safari cars and campers, to police vans and getaway cars. Our most popular passenger models are the 7-seater Model 88 and the 10-seater Model 109 Station Wagon.
11a. An attractive feature of the '66 Land Rover is that it is precisely as attractive as the '65.
12. Both cars have capacious rear doors for unloading bulk or people. The unathletic may use the fold-down step.
13. The after compartment has facing vents. This arrangement, although somewhat reminiscent of riding in a paddy wagon is extremely sociable. Late at night it is hilarious.
14. The Land Rover is available with a spare tire either mounted on the rear door or on top of the hood. The tires are identical in every respect save that it costs \$7.40 more to have one on the hood.
15. People who feel diffident about driving a Land Rover with the spare tire on the hood can buy the conventional Land Rover and save \$7.40.
PRICE. The model 109 Station Wagon illustrated in this advertisement cost \$3,906 on the Atlantic coast. \$4,092 on the Pacific coast. At places in between it costs in between. The Model 88 Station Wagon (shorter by 1 door) costs about \$600 less."
The text in the box reads,
"If you would like to listen to the Land Rover, or to the embarrassingly quiet Mark 2 Rover saloon, or to the 2000 Sports saloon (which has a little puny mutter when idling, which rises to a whispering roar in the lower gears, according to Mr Steinbeck, please ask any dealer here listed."
What can I say, I will leave you to draw your own conclusions why the 109 NADA didn't succeed in the States.
Ed.

See copy of ad
overleaf





Land Rover 109 Station Wagon with First Shield Roof.

The ad which appeared in American car magazines in the mid sixties, in an attempt to attract the potential Jeep buyer. See text in previous pages.

"At 60 miles an hour the loudest noise in this new Land-Rover comes from the roar of the engine"

What makes Land-Rover the most conspicuous car in the world? "There is really no secret," says an eminent Land-Rover enthusiast.

- 1. "Except for rattles, I am against silence in a car," writes John Stribeck, a Land-Rover enthusiast, "and I don't find a driver who doesn't want to hear his engine."
- 2. If this is so, then you may like the Land Rover very much indeed.
- 3. Our 4-wheel drive is quite forward. It is never a hindrance in any way. Its steering authority is coming to those of us who, which everybody is usually.
- 4. There is this about you only at 60 miles an hour. A Land-Rover is more conspicuous when it is moving still. With the lights off.
- 5. The Land-Rover stands surely even for tall. All its features tend to be in proportion.
- 6. Therefore, when driving, you will simply turn over traffic which previously had seemed the devil out of you.
- 7. This is not only safe and enjoyable, but you will want to observe how other

- drivers, over-taken by the Land-Rover's usual single, yield to Johnson.
- 8. I don't wonder that women are increasingly fond of driving Land-Rovers. The way around of such situations, unmovable immovability is beauty still.
- 9. You may have read of tests where "superior cars" found faulty in conditions? It's a pity we women's to share to help out the side. The Land-Rover is built to resist the charge of a bull, a rhinoceros, or a bull. Landis for that matter.
- 10. The Land-Rover's standard of construction (the under-frame resembles a reinforced section of railway track) makes it ideal for machine tools, car parts, or small houses, work, and articles, it uses.
- 11. There are perhaps 14 Land-Rover body panels ranging from what you would expect to pull vans and garbage cans. Our most popular passenger models are the 7-seater Model 98 and the 10-seater Model 109 Station Wagon!

- 12-14. An attractive feature of the 10 Land-Rover is that it is precisely as attractive as the '45.
- 12. Both of these have excellent rear doors for unloading both car and people. The outside they are the fold-down steps.
- 13. The other comparison has being seen. The arrangement, although somewhat reminiscent of riding in a public wagon, is extremely suitable. Late at night, it is delicious.
- 14. The Land-Rover is available with a spare tire either mounted on the rear door or on top of the hood. The tire are identical in every respect save that it costs \$7.40 more to be carried on the hood.

- 15. People who feel diffident about driving a Land-Rover with the spare tire on the hood can buy the conventional Land-Rover and save \$7.40.
- PRICE: The Model 109 Station Wagon illustrated in this advertisement costs \$3,990 on the Atlantic Coast, \$4,092 on the Pacific Coast, at places in between, it costs in between. The Model 98 Station Wagon (shown by 7 doors) costs about \$400 less.
- If you would like to know more about the Land-Rover, or to see the astonishingly quiet Mark II Rover Sedan, or to see the Rover 2000 Sports Sedan (which has a body party matter when riding that gives to a springing seat to the owner's feet," according to Mr. Stribeck's, please ask any dealer here listed, or write to a Land-Rover dealer, or to a Rover dealer, or to L.R., both.
- Thank you.



LAND-ROVER WITH A SPARE TIRE ON HOOD

Its a mystery....!

Grant Lohar.

About two years ago I bought my present Land Rover, 1960 Series 2 88", Chassis number 141002724 or did I?. Anyway after purchase the Land Rover underwent a chassis up rebuild, a conversion to diesel and a Fairey overdrive fitted. As with many of that ilk it had an 'A' suffix, and so I decided to try and retrieve its original number. No luck, it was still in use (Sacrilege!! - on a Suzuki), so I applied for and received an age-related SK plate. All seemed well until the 31st of December and a new road fund licence was needed.



Problem 1 : The counter clerk noticed that the index numbers on the V5 and the MOT did not match. Whoops! the MOT certificate had been overlooked when the numbers had been changed. No problem, send it back to the VRO office to have it amended.

Problem 2 : A week passed and it hadn't come back. The VRO had discovered that the chassis numbers on the two forms did not match either. No problem, it was probably a printing error as the numbers were very similar, and were only 34 apart. I was asked to compare the bulkhead plate and the chassis numbers, admittedly something I had not previously done, and discovered that sure enough the plate said I had chassis number 141002724 and the chassis said it was number 141002758.

Problem 3 : Why? I was asked to take the Land Rover to the VRO and have it inspected. Thoughts of stolen vehicles and losing my pride and joy started to go through my head. It was checked and nothing untoward was found which left the VRO as mystified as myself. A chassis change? A bulkhead change? A plate substitution? and so on. Most avenues were explored and most were discounted as the likelihood of many, with the chassis numbers being so close, was negligible. I went back through the reputable dealer that I had bought the vehicle from and we could come up with no new ideas as he had bought from the estate of a longstanding customer. Details from the BMIHT compounded it more, as the number of the original petrol engine (which was still in the vehicle when I bought it) did match with the plate number but not the chassis. Meanwhile the VRO searched their records and discovered that the Land Rover had been checked by them about seven years ago as the donor vehicle for a cherished number, and they had not noticed the discrepancy. This they suggested was probably because the examiner, not a Land Rover expert, would have just looked at the bulkhead plate. Thinking about it, if the MOT examiner had not been an LRD himself and knew where to look on the chassis, none of this would have happened. It hadn't been noticed for the last 33 years after all!

To continue and to cut a long story short, the VRO had discovered that somewhere (unregistered since 1987) there is an identical Series 2 with the opposing numbers to mine which was registered on the 1st of May 1960, two months later than mine. Their conclusion was that either at the factory or at the dealers the bulkhead plates (or the chassis?!) had somehow got exchanged or mixed up. Who knows?

Problem 4 : My vehicle chassis number 14002758 now has the wrong SK reg. which should belong to plate number 14002724 because the new index was done on the V5 which had the wrong number (or I had the wrong V5 - take your pick). Are you getting as confused as I was? Oh no, not another set of registration plates, its getting more expensive than the rebuild.

Sanity to the rescue! The VRO said I can keep the plates I have and that they will sort the problem out if they ever get a request to re-register 141002724. Phew! I'd be pleased to hear if anyone can shed some more light on the mystery.

On Safari.

David Ashley Hall

When we were in Kenya we 'went on safari' - in my case without the benefit of Virginia McKenna, refrigerators and singing porters. When we were in northern Nigeria we went 'on tour' generally in American type kit cars, though here it was on my Chestnut stallion ahead of fifty porters, (though they were too tired to sing). In Somaliland we 'went on trek'; by this time it was usually in Land Rovers, in our case a Series 1 with a special body, but Series 2 were coming into service with the Government Agencies. Though I had no appreciation of the difference - they either worked or they didn't.



My wife Cynthia and I did one 'trek' that took us sixteen days and fifteen hundred miles; no great distance, but this was a working trip, and for the whole of that time we saw no Tarmac at all, and only five faces other than those in our party. There were to have been two more, but one of them was shot and had to be evacuated with his wife. Our party consisted of the veterinary officer and his wife, a hides and skins officer, Cynthia and myself, together with a group of Somali cooks servants and drivers. The vet travelled in his Beetle, yes, a Beetle - he drove off at speed over the soft soil until he became bogged, then waited until we arrived to push him out, where upon he took off again and the whole process was repeated. Still it was more comfortable for his wife than the front seat of a Land Rover. There was a Government three-tonner with tents and the rest of the camp kit. We travelled in our own Series 1. The photo shows the site where we set up camp in open savanna. To give you an idea of the tribulations we suffered - on a number of occasions we bought a live sheep for the 'boys' which were duly slaughtered and eaten. One night while the skin (highly prized) was drying, it was stolen! I thought by a Hyena, but Somalis being a highly volatile race, made us pay compensation before we were able to enjoy our cooked breakfast.



Our camp on the Savanna. Note the vets Beetle.

On another day the vet had to operate on a government camel - they were still in use by the Police and some other departments - it duly died under the knife, the ensuing paperwork was horrendous. One day the two Land Rovers became separated and we became quite lost, no roads, no sense of direction, and certainly no people to ask the way, just a few ostriches seen through the heat haze. Luckily we had a map and were able to identify a cleft in the hills many miles away, and were able to make our own way off the Ban Ade Plain through the pass to Hudun, where we became re-united. During all this traveling we had suffered an accumulation of sand and latterite in the brake drums and they were virtually useless. So when it was decided to go down to the sea, down the Mait Bass, a drop of some 7,000 feet in about five miles, we decided it would be best to leave our Land Rover at the top and travel down in the more modern Government vehicle.



We were fortunate to visit the remains of the 'Mad Mullah's' Fort at Taleh, built by Mohamad Bin Abdulla Hassan before the Great War, when he nearly succeeded in driving the British out of the country. It still stands today despite being bombed in 1920, the ruins are so impressive that they are a standing testimony to his madness (or genius). The sudden climatic change from 7,000 to sea level and then back up again was too much for Cynthia, who took to herself to bed for a few hours on our return. During our trip we used some 77 gallons of fuel and a small tin of brake fluid, (as far as I can see from my records) not a drop of oil. This would indicate an unbelievable 19 mpg. The only other damage other than the brakes was a shock absorber falling off, but we managed to get home without it. From where I sit today - when even a trip out with the caravan calls for planning and an extra service - it seems to have been a monumental journey. At the time it was just an every-day undertaking with no special plans other than to stock up with petrol, food and water for a month in a three-tonner. Oh!, I forgot an adequate supply of beer !!.



Regular Land-Rover—hard top



Regular Land-Rover—canvas top



Long Land-Rover—truck cab

There's no substitute for the 4-wheel drive



**PETROL
or
DIESEL**

The Series 1 we used for our epic journey.




By Appointment
to Her Majesty Queen Elizabeth II
Manufacturers of Land Rovers
The Rover Co. Ltd.



The 1960's saw a wide range of companies producing many implements and attachments for use with Land Rovers. The fact that relatively few are seen today would suggest that most were only produced in very small numbers. We still see many winches of various types, perhaps some power take off units and even the odd belt pulley system, but the more elaborate machines are very few and far between. The fact that many were semi-permanently attached and therefore limited the number of other uses the vehicle could be used for was probably why most were only seen in the brochures.

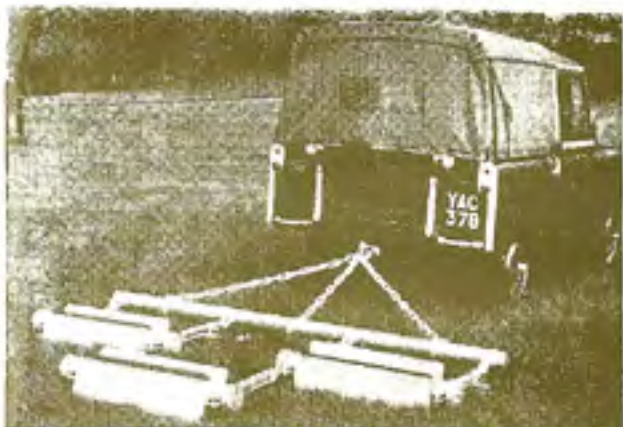
Towing heavy trailer



5-ton capacity winch



Weed breaking



Rotary brush cutter



Concrete mixing



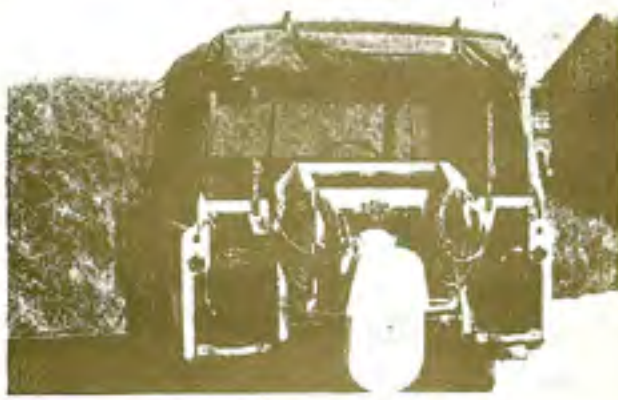
Pumping with tailboard-fitted unit



Towing heavy trailer



Electric welder





UN-TECHNICAL TALK

Over recent years I have noticed that workshop manuals and the like seem to totally ignore a key component of vehicles such as ours.

Originally its title was Critical Usage Sensor (CUS), it was designed to sense the drivers mood and how important it was that the different components worked. For instance, if you were late for an important meeting and got caught in traffic the sensor would pick up the stress at key positions in the vehicle such as steering wheel and ignition switch. The higher the stress of the driver the more chance of operating the switch, which would disable one or more parts of the engine.

In recent years however it has been renamed, I suspect it may be the influence of American terminology, it is now referred to as the Sensor Operated Disabling and Isolation Transponder (SODIT).

Although little is written about this component, the vast majority of D.I.Y. mechanics can diagnose the problem instantly when something goes wrong, shouting SODIT joyously having identified the problem so quickly.

There are other similar devices to the SODIT but their names are too technical for these pages.

So remember, always treat your Land-Rover with love and care, talking gently to it. Above all never shout, sneak up or rush it or you will discover the SODIT.

Steve Ashton, on the M5 with a SODIT

MOT Time

Jerry Bright

When its time once again for the annual check on the state of health of your Land Rover its fairly straightforward to check the obvious like lights, indicators and horn, obvious chassis corrosion etc. This article is not about the obvious failure points and it does not cover every possible instance. It is based on personal experience on submitting a Land Rover for its annual test. These are pointers picked up by the MOT tester, requiring them to be rectified before a certificate would be issued.

1. Handbrake

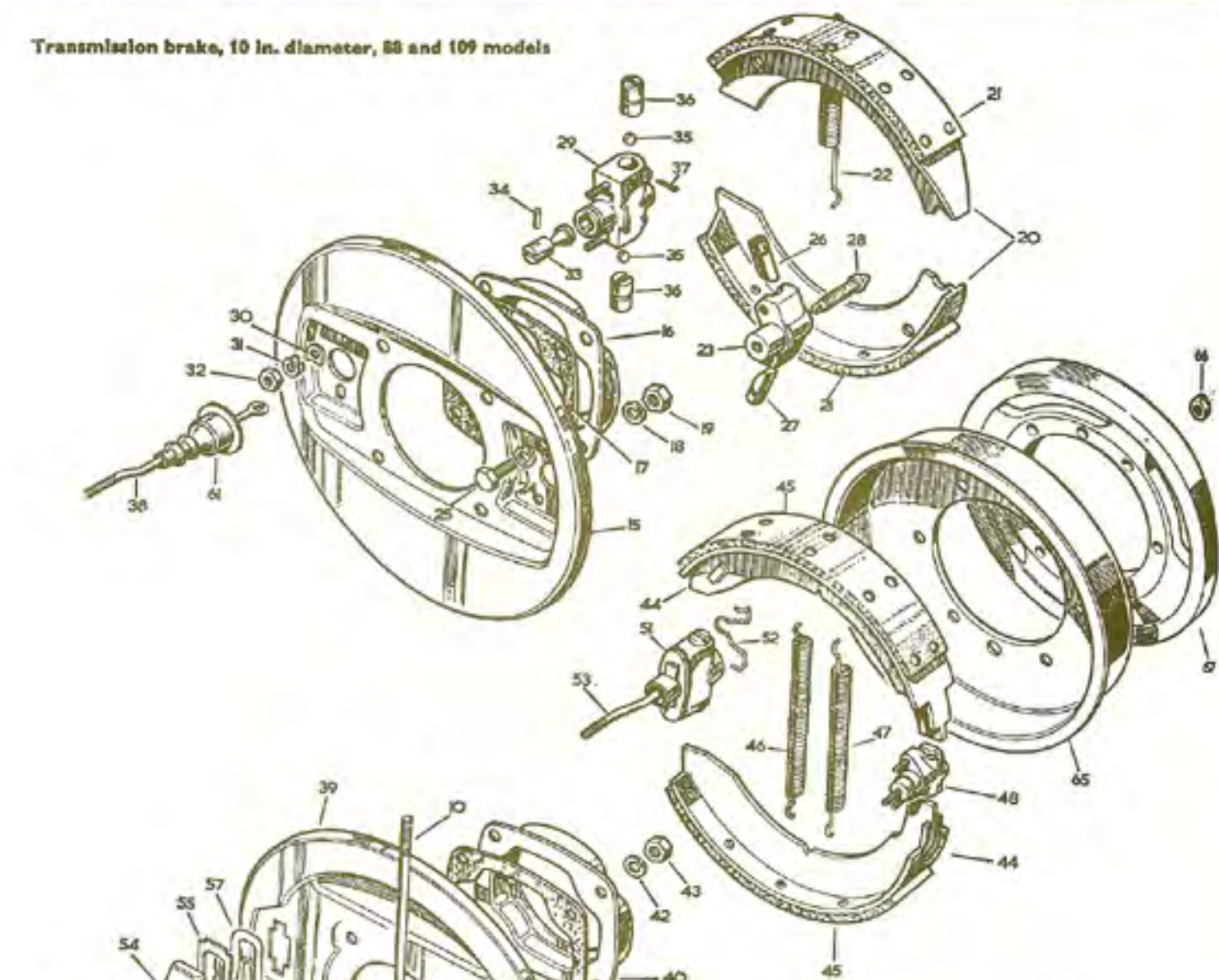
There is an adjuster for the handbrake to bring the shoes closer to the drum. It is secured to the backplate by two nuts which should have a lockplate to prevent them from undoing. Over the passage of time the nuts had become loose and the threads damaged on the adjuster. Consequently when the handbrake was applied the adjuster moved laterally on the backplate. Although the handbrake was perfectly adequate for holding the vehicle on a steep hill. Rightly or wrongly this earned a fail from the tester.

While on the subject of the handbrake there is supposed to be a rubber boot on the rear of the backplate, where the lever enters the backplate. A missing boot once resulted in a fail.

When applying the handbrake, one of the rubber mountings for the gearbox was observed to have parted company from where it was bonded to the backing plate. A gap was clearly visible. This can also result in a fail. One more potential failure point is the right angle relay lever that transmits the movement of the handbrake lever. This is known to seize and cause difficult operation, or sticking. Some oil here will ensure it keeps turning freely.



Transmission brake, 10 in. diameter, 88 and 109 models



- 1 Shaft for hand brake relay lever
- 2 Bolt ($\frac{1}{2}$ in. UNF x 4 in. long) } Fixing shaft to chassis frame } Up to vehicle suffix "C" inclusive
- 3 Self-locking nut ($\frac{3}{8}$ in. UNF)
- 4 Shaft for hand brake relay lever
- 5 Self-locking nut ($\frac{3}{8}$ in. UNF) fixing shaft to chassis frame
- 6 Relay lever assembly for hand brake
- 7 Bush for relay lever
- 8 Plain washer } Fixing lever to spindle
- 9 Circlip }
- 10 Brake rod, relay to hand brake lever

- 11 Clevis fork end } Fixing brake rod to relay and hand brake lever
- 12 Clevis pin complete }
- 13 Locknut ($\frac{1}{4}$ in. UNF) }
- 14 Split pin }
- 15 Anchor plate, transmission brake
- 16 Oil catcher for transmission brake
- 17 Joint washer for oil catcher
- 18 Spring washer } Fixing anchor plate and oil catcher to speedometer housing
- 19 Nut ($\frac{3}{8}$ in. UNF) }
- 20 Brake shoe assembly, boxed pair
- 21 Lining complete with rivets for shoe
- 22 Pull-off spring for brake shoe
- 23 Adjuster housing
- 24 Spring washer } Fixing adjuster housing
- 25 Set bolt }
- 26 Plunger, RH
- 27 Plunger, LH
- 28 Adjuster cone
- 29 Expander housing
- 30 Special washer } Fixing expander housing
- 31 Spring washer }
- 32 Simmonds nut }
- 33 Expander cone
- 34 Pin, fixing cone to brake rod
- 35 Roller for expander
- 36 Plunger for expander
- 37 Split pin, fixing plunger
- 38 Brake rod, expander to relay lever

Up to gearboxes numbered:
146000565
156000430
151005187



- 39 Anchor plate, transmission brake
- 40 Oil catcher for transmission brake
- 41 Joint washer for oil catcher
- 42 Spring washer } Fixing anchor plate and oil catcher to speedometer housing
- 43 Nut ($\frac{1}{2}$ in. BSF) }
- 44 Brake shoe assembly, boxed pair
- 45 Lining complete for shoe, boxed pair
- 46 Pull-off spring, expander end } For gearboxes numbered: 146000566
- 47 Return spring, adjuster end } shoe 156000431
- 48 Adjuster unit assembly } 151005188 onwards
- 49 Nut ($\frac{1}{2}$ in. UNF) } Fixing adjuster unit
- 50 Tab washer }
- 51 Expander unit assembly
- 52 Clip retaining tappets
- 53 Brake rod, expander to relay lever
- 54 Dust cover for expander unit
- 55 Packing plate } Fixing expander unit
- 56 Locking plate }
- 57 Retaining spring }
- 58 Clevis complete } Fixing brake rod to relay lever
- 59 Locknut ($\frac{1}{2}$ in. BSF) }
- 60 Split pin }
- 61 Dust cover for brake rod
- 62 Return spring for brake rod
- 63 Anchor for spring
- 64 Anchor for spring, on transfer box
- 65 Brake drum
- 66 Self-locking nut ($\frac{1}{2}$ in. BSF) fixing brake drum and damper
- 67 Transmission damper at rear end of gearbox



Fig. H1-58. Brake pedal bracket fixings

- A—Brake pedal
- B—Return spring for pedal
- C—Fixings for brake pedal bracket (6 off)

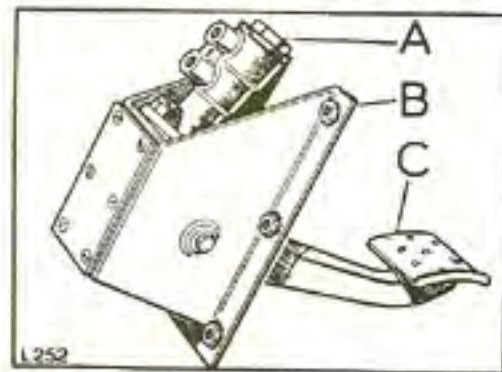


Fig. H1-59. Brake pedal and bracket assembly

- A—Master cylinder
- B—Bracket for brake pedal
- C—Brake pedal

2. Footbrake.

There are 6 bolts holding the footbrake pedal box to the bulkhead. On one vehicle I recall, one of these bolts was missing - due to a stripped thread on the captive nut on the pedal box. This caused a fail also. This was rectified by drilling out the nut slightly oversize and fitting a normal nut and bolt.

I have seen the tester and his assistant press hard on the brake lever and watch for any leaks. Where I had renewed the brake pipe over the rear axle, the brake union nut to the wheel cylinder just allowed a very slight weep of fluid. I was allowed to get a spanner to tighten the nut on this occasion !.

3. Steering.

On the Series 2 and 2A the steering wheel has splines which fit over the steering shaft. Where the clamp nut has been allowed to get loose over the years slight wear of the softer material in the steering wheel will begin to wear. This causes the wheel to rock when the wheel is pulled one way then the other. No amount of tightening of the clamp bolt will rectify matters. By the time this stage has been reached it has gone too far. A fail once resulted from this problem, in fact I had to try 3 or 4 wheels before I found one which didn't rock after the clamp bolt was tightened. New Series 2 and 2A wheels (when available) are around £100!;

4. Hubs.

Check that the brake backplate does not have the tell-tale oil stain at the 6 o'clock position. This means that oil is leaking past the hub oil seal, and running down the inside of the brake backplate. In extreme cases it will contaminate the linings if left. If you notice your brakes pulling up unevenly, even after adjustment, it is always worth removing



the hubs to check this out. The tester may fail the vehicle even if the brakes come up to scratch. One way of avoiding this is to ensure that the axle oil breathers are working. Very often they are rusted solid, leaving no expansion allowance once the oil heats up in the axle. Remove them and check that the ball inside moves freely, perhaps using some light oil to ease it. If the ball will not free, discard the unit and fit a replacement. If the vehicle is used offroad regularly it might pay to fit the later type 90/110 oil breather which has a long plastic tube fitted which can be routed under the bonnet out of the way of the mud and dirt. This will ensure that pressurisation does not force oil past the next weakest source, the hub seal !. If you do have to replace a hub seal or two try and source the leather type rather than the plastic type, these are much better. Also remember to check the condition of the spacer washer that the seal is in contact with, any scores or burrs will mean you will be replacing the seal again in a few weeks time.

5. Swivels.

These are the two gleaming chrome balls seen at each end of the front axle. At least they should be gleaming. They are all too often rusty and pitted. They house the universal joint near the end of the half-shaft which allows the front wheels to turn. The housing is full of oil and any scratches or scores will allow this oil to pass the seal which is seen around the circumference of the chrome swivels. At the top and bottom of the housing there are phosphor bronze bearings which are lubricated by the oil. The bottom bearing obviously is still lubricated even if the oil level is quite low, but the top bearing relies on the revolving universal joint to splash oil on to it. So if the level does drop below the UJ then not only will the needle roller bearings in the UJ wear, but the top bearing will begin to wear rapidly.

For the purposes of the MOT first check the condition of the bearings. You will need an assistant for this. Make sure the handbrake is on with the vehicle on level ground. Jack up the front wheel and place a stand or block beneath the axle, then, holding the wheel at the 6 and 12 o'clock position try and rock the wheel in and out. If it can be, then ask your assistant to apply the footbrake. If excessive movement is still possible then one or both of the bearings need replacement. If you're not confident whether you are detecting excessive wear or not, take further advice !. There needs to be a slight movement otherwise the wheel bearings would seize.

Back to the swivels themselves. Usually they are pitted with rust and no leaking oil is evident. This usually means that the swivel housing no longer contains any oil, with consequently no lubrication for the bottom swivel bearing. If the surface of the chrome ball is pitted and there is a lot of leaking oil, this means that refilling will merely prolong the messy leakage. The pitting on the ball ruins the seal and replacing without attending to the balls will be a complete waste of time. Where does this leave us regarding the MOT ? Well, you might just scrape a pass. But if the vehicle is 'bounced', then there are two options. Either replace the balls and the seals, or if funds don't stretch that far, the worst of the pitting, if not too far gone will polish out by using progressively finer emery cloth. Start with something like p80 grade and work down through p280, then down to p500 or similar. The object of the procedure being to produce a smooth, as near spherical as possible surface which will prevent the seepage of oil past the seal when the damaged area passes over it. Finally it would be a good idea to fit the leather gaiters over the swivels to protect them from the elements, this will also help to prevent rust from forming on the surface as any damage to the surface will mean that the chrome will have been removed and the steel substrate revealed.

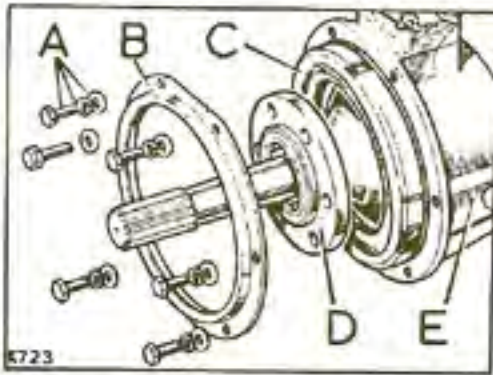


Fig. F1-51. Oil seal for swivel pin housing

- A—Fixings (6 off) oil seal retainer to bearing housing
- B—Oil seal retainer
- C—Oil seal for bearing housing
- D—Swivel pin bearing housing
- E—Swivel pin housing

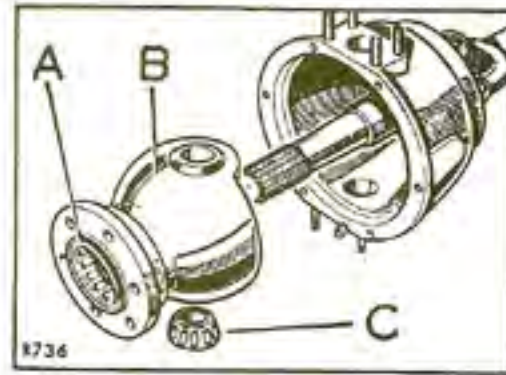
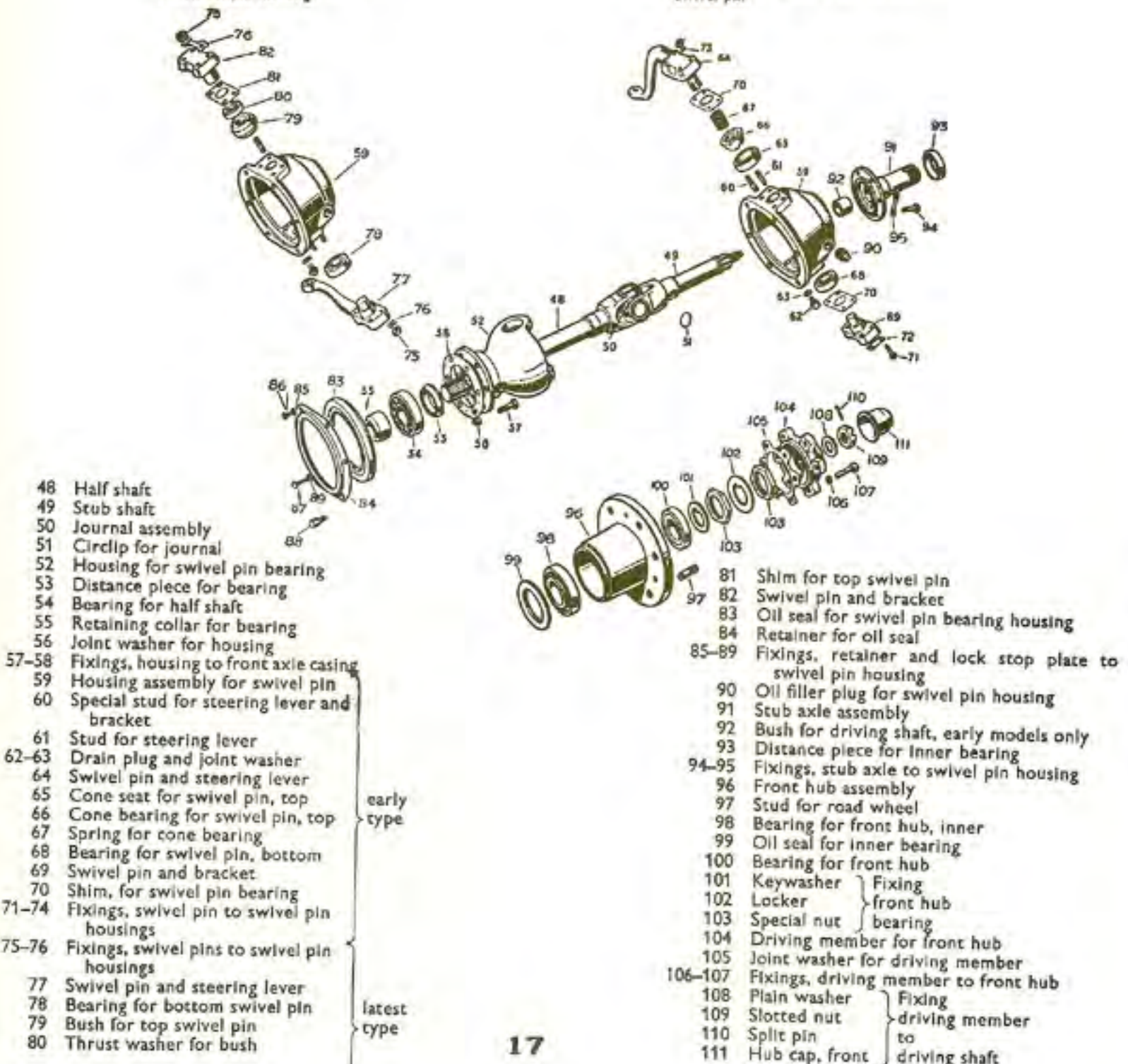


Fig. F1-53. Swivel pin bearing housing

- A—Roller bearing for axle half shaft
- B—Bearing housing
- C—Taper roller bearings for bottom swivel pin



- 48 Half shaft
 - 49 Stub shaft
 - 50 Journal assembly
 - 51 Circlip for journal
 - 52 Housing for swivel pin bearing
 - 53 Distance piece for bearing
 - 54 Bearing for half shaft
 - 55 Retaining collar for bearing
 - 56 Joint washer for housing
 - 57-58 Fixings, housing to front axle casing
 - 59 Housing assembly for swivel pin
 - 60 Special stud for steering lever and bracket
 - 61 Stud for steering lever
 - 62-63 Drain plug and joint washer
 - 64 Swivel pin and steering lever
 - 65 Cone seat for swivel pin, top
 - 66 Cone bearing for swivel pin, top
 - 67 Spring for cone bearing
 - 68 Bearing for swivel pin, bottom
 - 69 Swivel pin and bracket
 - 70 Shim, for swivel pin bearing
 - 71-74 Fixings, swivel pin to swivel pin housings
 - 75-76 Fixings, swivel pins to swivel pin housings
 - 77 Swivel pin and steering lever
 - 78 Bearing for bottom swivel pin
 - 79 Bush for top swivel pin
 - 80 Thrust washer for bush
- } early type
- } latest type

- 81 Shim for top swivel pin
- 82 Swivel pin and bracket
- 83 Oil seal for swivel pin bearing housing
- 84 Retainer for oil seal
- 85-89 Fixings, retainer and lock stop plate to swivel pin housing
- 90 Oil filler plug for swivel pin housing
- 91 Stub axle assembly
- 92 Bush for driving shaft, early models only
- 93 Distance piece for inner bearing
- 94-95 Fixings, stub axle to swivel pin housing
- 96 Front hub assembly
- 97 Stud for road wheel
- 98 Bearing for front hub, inner
- 99 Oil seal for inner bearing
- 100 Bearing for front hub
- 101 Keywasher } Fixing
- 102 Locker } front hub
- 103 Special nut } bearing
- 104 Driving member for front hub
- 105 Joint washer for driving member
- 106-107 Fixings, driving member to front hub
- 108 Plain washer } Fixing
- 109 Slotted nut } driving member
- 110 Split pin } to
- 111 Hub cap, front } driving shaft



6. Springs.

Naturally a vehicle will get a fail if any spring leaf is broken. However, even if the springs are not broken a fail can result from the following:

Different springs fitted to the same axle, i.e. a different number of leaves fitted.

When the spring has grown in thickness immediately to front and rear of the axle, due to rust.

7. Shock absorbers.

Contrary to popular belief shock absorbers that have rusty outer casings should not earn a fail, providing there are no leaks. But what is frequently overlooked during a pre-MOT check, is the top and bottom bushes. Don't get a fail unnecessarily, change them if you can move the shock absorber.

That's about everything that comes to mind at the moment. I would be interested to hear of other peoples experiences.

Brake and Clutch Overhaul

Jerry Bright

The following article is not intended to be a complete 'How - to - do - it', but is a series of dis-connected jottings covering points learnt after having done the job several times.

The Symptoms

The 'book' says that being hygroscopic, brake fluid should be replaced every 18 months, but few people ever do. As a result the bleed nipples are rarely undone and usually twist off when one attempts to undo them. This lack of fluid change tends to lead to corrosion in the wheel cylinders and master cylinder, causing poor brake performance and leaks from the hydraulic system. A classic sign is damp around clutch and brake pedals due to escaping fluid.

All in all its time to execute a full overhaul before you are let down in a big way.

Brakes

If you are doing the complete system the following points are worth noting:

1. Bleed all the fluid out of the system first - there is nothing more irritating than brake fluid coming out in large quantities every time a pipe is disconnected.
2. If the wheel cylinders are sticking there are two choices:- replace with new units, or overhaul them properly. It is a complete waste of time to merely replace the rubber seals, the cylinders must be honed using a proper honing tool, such as the type marketed by Snap On or Sykes Pickavant.
3. No doubt the pipe unions will refuse to come undone and any serious attempts will twist the pipe off. Don't bother if they won't free, use a Junior Hacksaw and cut them off as close to union as possible. This will also make it easy if you are making the pipes up yourself, and saves all the bother of measuring up etc.
4. When refitting the rear wheel cylinder, check that they are rear cylinders. Front ones will fit but will give a 'long' pedal because of their greater capacity.
5. Don't do up the wheel cylinder bolts straight away, let them 'float' to allow the brake union to be installed and the thread started. I find it best to fit the new pipe to the three way connector and then to the wheel cylinder.
6. Do secure the brake pipes, it is not safe to have them



General

There are two types of master cylinder in use, and care should be taken to correctly identify the unit concerned. A cylinder of the centre valve ('CV') type is normally fitted to 88 vehicles, and a cylinder of the compression barrel ('CB') type is fitted to 109 vehicles. For removal and refitting instructions of the 'CV' type master cylinder, Operation H1-5 refers.

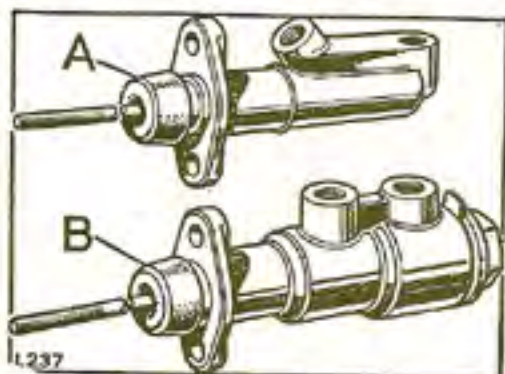


Fig. H1-56. Identification of master cylinders

- A—'CV' type master cylinder
- B—'CB' type master cylinder

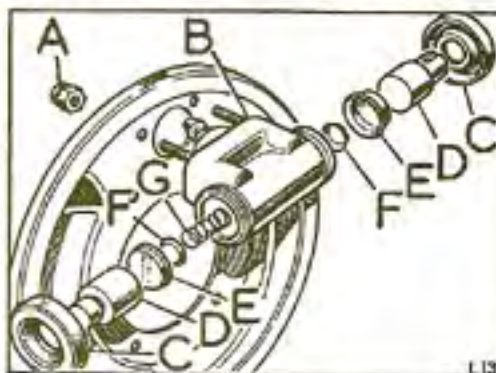


Fig. H1-75. Wheel cylinder

- A—Fixings for wheel cylinder
- B—Wheel cylinder
- C—Dust cover
- D—Piston
- E—Seal
- F—Support for seal
- G—Spring

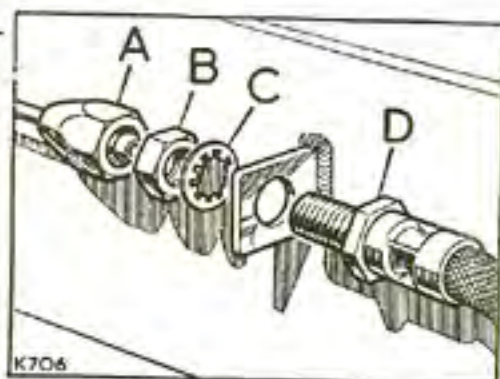


Fig. H1-73. Brake pipe connections

- A—Pipe from master cylinder
- B—Locknut
- C—Shakeproof washer
- D—Flexible brake pipe

flapping about, chafing etc.

7. If you do make your own pipes use Kunifer 10 alloy, it doesn't corrode and is far easier to work than steel.

8. The pipes joining into to the four-way connector mounted to the right hand side of the chassis can be awkward to replace. Use a union without any pipe attached to clean out the threads and take care not to get the union with the pipe attached cross-threaded. As with the back-axle. Connect to the four-way connector first, before you connect the other end of the pipe.

9. When overhauling the brake master cylinder its probably advisable to overhaul the clutch hydraulics at the same time. They share the same fluid reservoir.

10. Use 'Plus Gas' or similar on the captive nuts and leave to soak if over-tight. There are not usually too many problems in removing the 6 bolts on each pedal box, especially if the vehicle is a diesel !!.

11. Before loosening off the six securing bolts, undo the pipework leading to the master cylinder. With a little cautious spanner-work the pipes will normally free. Don't forget to use two spanners on the underside of the reservoir when freeing the feed to the clutch master cylinder. If you don't do this the pipe union will probably twist the bottom out of the reservoir. These by the way are no longer available for the benefit of those wishing to keep things original.

12. The master cylinders do not usually suffer from the same degree of corrosion as wheel cylinders, so there may be a chance of saving the rubber seals, but once again, do hone the bores before fitting the new seals.

13. All new seals are best left to soak overnight in brake fluid before fitting, especially the master cylinder seals that have to be stretched to fit the piston.

14. There is a rubber seal that goes between the pedal box and the bulkhead to keep water leaks out. If the pedal box has been in and out many times these seals may be missing, get some in before starting the job.



15. There is only one way to remove the slave cylinder. Take both floor panels out together with both gearbox covers. Invariably the bolts securing the floor panels are missing, this makes the job much easier !. For those not so lucky, and where the bolts used have 1" of thread protruding from the nut which no doubt will be very rusty, there are two easy ways to remove them. Cut the bolts with an oxy cutting torch (from underneath so as not to damage the floor panel). Or, as an alternative, centre punch the bolt head and use a small drill as a pilot, and then a larger diameter to drill them out. Applying a spanner to the bolt should cause the bolt head to twist off.

16. Overhaul of the Clutch slave cylinder is straight forward, even if removal isn't !. Free off the flexible pipe from the bulkhead to remove the cylinder and flexible pipe. If the flexy pipe feels spongy, has leaks, replace it now. Hone out the slave cylinder and rebuild. Fit a new hose if necessary not forgetting the copper washers, tighten up off the vehicle, and re-fit.

The replacement of Master Cylinders into pedal boxes is virtually impossible without a second pair of hands. Use a vice to hold the pedal box and also use a pair of long-nose pliers to insert the lower bolt. There are nay connections to make at the pedal box end, but I suggest that the bolts holding the pedal boxes are inserted first. Do the brake pedal box ones up loosely to allow it to float. Likewise with the Clutch pedal box.

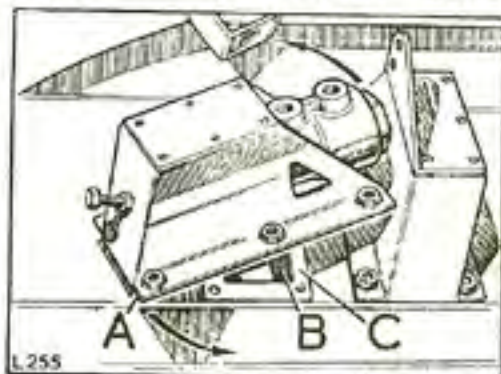


Fig. H1-25. Fitting brake pedal and bracket

- A—Brake pedal and bracket
- B—Aperture in toe box
- C—Gasket

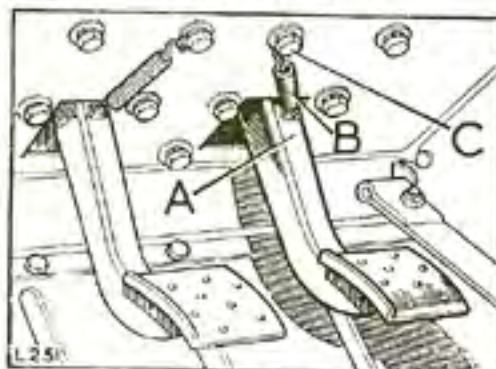


Fig. H1-21. Brake pedal bracket fixings

- A—Brake pedal
- B—Return spring for pedal
- C—Fixings for brake pedal bracket (6 off)

Make sure that the unions on the pipes between the fluid reservoir and the Master cylinders are free, apply some 'Copperslip' or some oil (apply very sparingly). Clean off all surplus oil. By clever juggling, it is possible to allow the pipes to support the fluid reservoir as the mounting bracket covers the adjustment nut on the clutch/brake pushrods.

Next, fit the remaining pipes and tighten. Now tighten the six bolts securing the pedal boxes to the bulkhead. Follow the manual regarding adjustment of the brake/clutch pedals, then the floors will have to be replaced. Fill up the fluid reservoir - checking beforehand that all the bleed nipples are tight. Check for leaks and then call for your assistant and bled brakes as per manual.

Other thoughts...

When replacing brake shoes, make sure that the top spring is secured on the post on the backplate and on the other brake shoe. It is not supposed to pull both shoes together at the top. If this is done the piston in the wheel cylinder will be pulled in too far, resulting a very long pedal travel. The Masre Cylinder is sometimes difficult to prime, to set the bleeding proces in motion. The head of fluid in the reservoir seems insufficient to set the bleeding process off. Undoing, or at worst removing the output pipe from the from the Master Cylinder usually allows fluid to eventually trickle down into the Master Cylinder. Once fluid emerges replace the pipe and bleed as normal.



A nasty knocking - retro-fitting a 2286 diesel to a series 2 or 2a Land Rover.

Copyright Ross Floyd

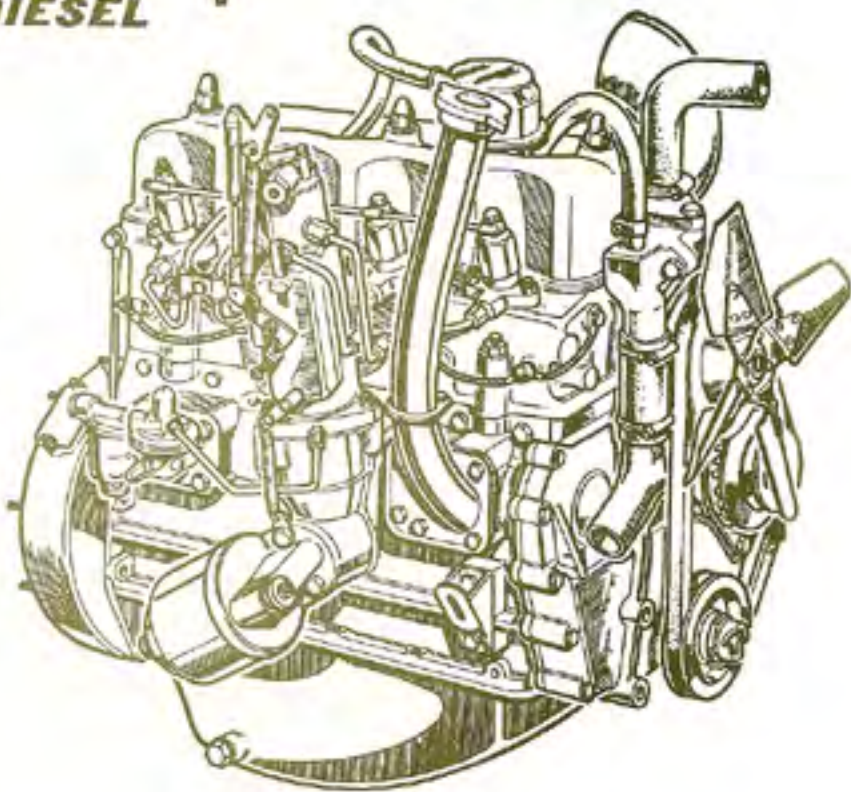


PETROL or DIESEL ?

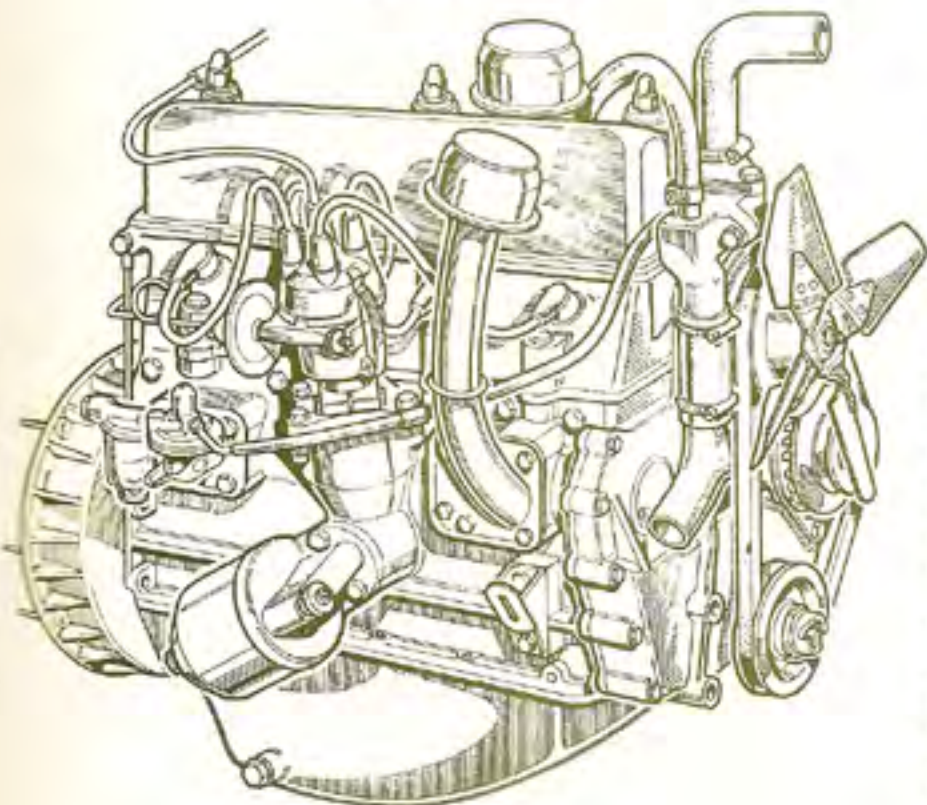
2 1/2 LITRE DIESEL

WHY DIESEL?

With the growing emphasis on diesel engines, the owner of a petrol engined Land Rover is beginning to get something of a raw deal. Not only is it necessary to use four star fuel at an extortionate price, but the engine, for all it's torque and smooth power, swallows an unacceptable quantity of the stuff for remarkably little real benefit in everyday use, while the superb engine braking and rock steady idle of the diesel make it a far better engine for off road and PTO operation.



2 1/2 LITRE PETROL



The Land Rover petrol 2286 engine will give around 16 m.p.g. and a diesel around 25 m.p.g.. Please don't come back screaming, those are general figures. Diesels are noisier and somewhat slower and have less torque, and if not looked after, don't last very long, around 80,000 miles like their petrol counterparts, possibly because they are based on the same block rather than being a 'diesel design' - however if they are maintained and given regular oil changes with a good oil like GTX, then 150,000 should be possible. If you want much cheaper motoring, don't mind an increased noise level and a bit of smoke and are prepared to cruise about 10mph slower, then why not consider a diesel!



The Land Rover engine was not in production, generally unchanged, from 1961 until 1989 on a whim. It is a reliable, sound and first class unit - and make no mistake about it, it is absolutely ideal for the job it has to do. Fitting a Land Rover engine means Land Rover parts - there are then no spares problems in the future and the job is a nuts and bolts affair. It keeps insurance in a known group (you must let the Insurance Company know and check this in advance) and provides an engine matched to the transmission and vehicle. Fit a different engine and you get into the field of stronger gearboxes, revised axle ratios, custom exhausts and conversion plates to fit between engine and gearbox. Fit a 2286 and everything is off the shelf, you can get spares and service anywhere - and you won't smash the transmission if you drop the clutch! It may be a bit slower than a Perkins or big B.M.C., but unless you intend to cruise the motorways or tow very heavy loads (in which case buy a Range Rover), the 2286 diesel is economical, sweet tempered and just drops in.

YOU PAYS YOUR MONEY...

Conversion is not that difficult - a week of evenings - albeit going like the clappers - should see you up and running, but the first problem is to find a good engine.

Currently, the price for a diesel is about £200 for an 'on the floor' unit. The cost of a rebuild is about £750, give or take and a new injector pump is about £150 - £ 250, injectors about £25 each. You can buy cheaper but watch the quality! Go to Turners and you will play a lot more - but you will get a lot more too. Some companies at the other end are offering a rebuild for 500 quid and a parts only warranty - great if it breaks and you have to pay to remove it, return it AND pay the labour! It really is Russian Roulette. Either you install and take a chance or you rebuild. Generally, it is safer to rebuild, and do it well. The Land Rover Diesel is much sought after, especially for export to Africa, and if it's not in a vehicle, unless you know the engine, assume it is knackered. If the head is damaged, which a few seconds without coolant can do, then look at another £300. In short, you might need a clear £1000 to do the job if everything goes wrong - Turners price isn't that expensive then is it - and you KNOW you have a good engine! But anyway, if you expect the worst, it can only get better!

It is very difficult to check a diesel, but you can do the usual things if it is running. Oil pressure should be around 45 p.s.i. at tick over, it shouldn't smoke. If there is a lot of white smoke, check the position of the injector pump as this would indicate the timing is retarded and fuel is not being burned. The pump has a direction arrow - to advance the timing you turn the pump body the opposite way to this arrow - if there is no adjustment left on the pump slots (not the bracket!) the engine is going to need some major surgery as it is badly worn and when the wear gets worse, you won't be able to take up the slack - M.D.I. failure for starters!

Apart from oilleaks and really horrid noises, you can carefully place a steel rod on the engine and put your ear to the end, moving it around (watch the fan and belts!!). This will let you listen to the internals near the end of the bar and gives an idea of trouble, otherwise if you suspect something is wrong and that it is masked by the diesel knock, drive slowly along, and pull the engine stop. If the noise continues, it's engine, if not it's diesel knock which can usually be cured by injectors. My strong advice, is that if you don't know the engine or can't see it driving, only pay a scrap price. Diesels are just too expensive to take a chance.



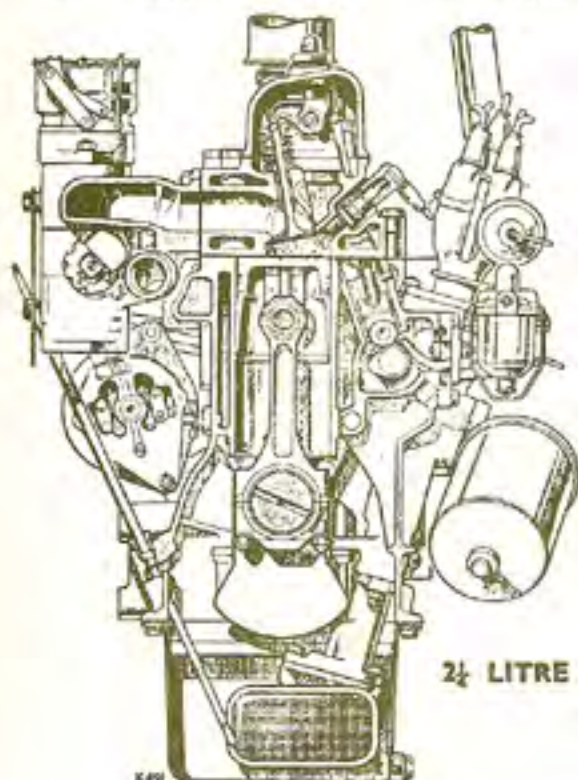
Having said that, I have just fitted an 'unseen' unit from a good friend (how good!!!!!!) and only time will tell - but you have been warned. There is really no halfway house with a diesel rebuild - and it is much better to start off with a unit which you can rebuild in one go and then install. Otherwise it will cost a fortune in parts, downtime and of course hassle. It may seem that you are throwing money away now, but in the long term, if you intend the vehicle to do some useful work and last a long time, start the way you mean to carry on. Against that, you must weigh up what you want to do with the vehicle. If it's a hobby car or a low mileage off roader, then don't start the conversion at all. If you intend high mileages do you have the right vehicle - and what will happen when you sell it - will the engine have cost more than the vehicle is worth!

One other point to remember. A diesel will run for a number of years and you don't want to spend a lot of money and time on a heap. And remember the old saying that 'fools fit new engines for wise men to buy'. If you don't do many miles, if you don't intend to keep the car, if you won't see your money back quickly in improved fuel costs, **DON'T BOTHER!** You have to go an awfully long way with petrol to make up the difference on the cost of a fitted diesel!

THE DIRTY BIT

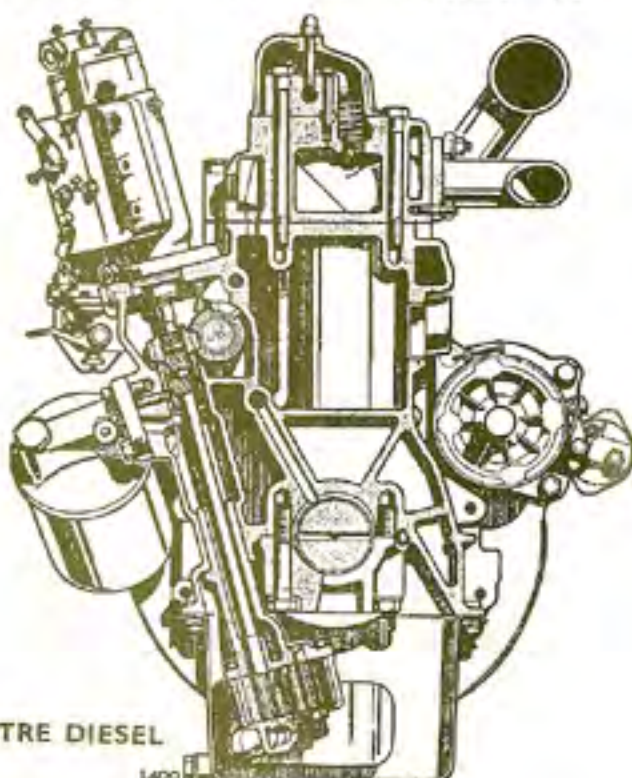
Fitting a diesel is a messy business. Once running - they should be fuel tight, but rarely are while lubricant goes black in seconds and resembles a mixture of soot and milk - you **MUST** use a good barrier cream on your hands and wash thoroughly. Diesel exhaust can cause cancer, so don't operate in an unventilated area. As fuel creeps, you, and the garage will soon be covered.

To do an engine swap, the first action must be to remove the body-work. Wings, bonnet, possibly the front panel and radiator. Then you can get at the works. Otherwise, it's a miserable business and there are so many things to do in the engine bay that you may as well work comfortably and enjoy the job. Anything that is worn or damaged is best torn out at this point - one of the benefits of a diesel is



2 1/2 LITRE PETROL

Cross-section view of engine



2 1/2 LITRE DIESEL

Cross-section view of engine



reliability and that won't be helped by ancient wiring, rotten brake pipes to name just two. You might as well fit an alternator at the same time and that is a 10 minute job - but be warned, I started a major restoration by changing a front wing - it can grow on you!

Your first decision is how to get the old engine out. Having done some myself using a jury tackle and a husky winch, I now ask our local garage to haul the block out and refit the new one. In this way, for about £40.00, I don't spend a weekend lying in the dirt and risk, and it is a risk, having a very heavy engine on an unstable lifting rig. Far better to strip an engine down to mountings and bell housing and prepare the new unit likewise, trailer the car to a garage (most will collect) and let a professional do the really nasty bit. The time consuming part is the plumbing in, bleeding, testing and putting the bits back together, so do that your self and let someone else get the trapped fingers.

When you strip the petrol engine, keep all the bits - they may be useful as spares or can be sold on although you will find that a number of items will fit the diesel. The manifolds however won't and you will need a new air cleaner pipe and a fuel filter unit, although the best thing to do is to cannibalise the donor vehicle for everything possible, including the fuel tank and return pipe. The diesel bell housing may require some butchery to fit around the clutch slave cylinder, depending on the age of the two parts, but if you warn the garage, this shouldn't be a problem. Don't forget to fit a new diesel clutch to the new engine so that you won't have to pull it out again straight away! If you ask the garage to drain the oil from the diesel, this will save a horrible mess at home too - and they can dispose of it correctly!

Things which are different on a diesel are the throttle, which can be taken from the donor vehicle, the heater/starter plugs, fuel return and filters, wiring, engine stop, front springs and the braking system. If you don't do them all, and do them correctly, don't bother to do any as you will have an unreliable and possibly dangerous vehicle.

THE ELECTRICS

The wiring is generally a direct swap although you must check the starter which may be a pre engaged unit and is a much heavier item. This isn't difficult but all fittings must be made correctly to prevent melt down on a cold morning. Fit the biggest battery you possibly can, this need not be expensive about £40 from 'Mole Valley Farmers' will see a monster which will crank a 2296 diesel for about FIVE minutes - and if it won't start in that time you do have problems and very likely a wiring fire as well! Make sure you secure the battery too - apart from failing Club scrutineering on the spot, any bump or small accident will let the battery short out on the bodywork and you are certain of a serious engine bay fire. Common sense, but we still see them!

The heater plugs run through a resistor coil which looks like something out of Frankenstein's laboratory. The heaters need a switch to operate and must not be capable of being left 'on' when running. A neat trick here is to use your choke control. This has an electrical contact for the warning light and can be wired via a relay to the engine heater circuit, while the cable itself will fit neatly onto the distributor pump to operate the engine stop - no extra switches or buttons - all neat and it looks right too and by definition, you can't have the engine running and the heaters on, while if some enlightened teenager on bail tries



to borrow your vehicle, pulling the choke is not going to help!! To start, you warm up with the control pulled out, start cranking the engine which purges the fuel line (a benefit if you have the odd air leak !) and then push in the choke knob - and away she goes!

Put a big alternator on, with the correct pulley, not the old dynamo one, and wire the output directly to the battery with heavy cable. An 18 ACR is the minimum and this gives about 40amps (500 watts), but the best is the range rover unit which hurls out 65 amps (800 watts) and will provide power for winches and BIG lights! If you are going to do the job, do it well! Make sure you grommet all the cable clips and for this purpose, a handful of rear brake pipe rubber split sleeves are superb - the things you see on the rear axle brake pipes!

SUCK IT AND SEE!

Braking is no problem UNLESS you have a servo. Diesels don't have an intake vacuum like a petrol manifold and you can't just plumb in. On 'overrun' when you need brake boost, the petrol manifold is sealed by the throttle flap and a very high vacuum develops. Diesels don't have a throttle flap as the control is done by the amount of fuel injected (that is why you see a dirty puff from a diesel as it speeds up - until it reaches the 'new' speed the mixture is richer and comes out as black smoke!). The best way is to produce the vacuum mechanically. Forget the Land Rover brake system which is supposed to be awful and try to find an exhauster pump similar to the unit fitted by Santana. This is a dinky belt driven vacuum pump which gives a devastating brake boost at all engine speeds. Failing that, any other small pump should do and is connected directly to the servo with an oil trap in line. Don't ignore the brakes - not to refit the booster would be to seriously downgrade the system and your insurance would be void - and you might find you can't stop!

You MUST ensure your air filter is secured and that any crank case breathers have working traps fitted. This goes for all diesels. A diesel isn't fussy where it gets its fuel and if oil gets into the air intake, the engine thinks the throttle has been opened up and away it goes. The injector pump has a governor to control the engine speed and unless it fails, the engine has a top speed it can't exceed. Add the joker in the form of oil from air cleaner or crank case and there is no limit - the engine will run away and there is NOTHING you can do to stop it. Either it runs out of 'extra' fuel or blows up - literally. Very often if the engine begins to disintegrate oil is forced up the breathers and the thing runs even faster. While you might manage to 'stall' the engine on the clutch, if you roll over it is no joke at all, especially if you are still inside at the time!

FUEL & AIR DON'T MIX.

The fuel system is VITAL. It must be 100% leak free. Diesels will need a second 'return' pipe as there is always a little fuel being 'spilled' back to the tank. It comes from the injectors which 'spill' unneeded fuel and from a banjo bolt in the top of the fuel filter which acts as an air vent. This bolt acts as a purge to keep the system free from air, but there shouldn't be any and it can only handle a tiny amount. A petrol engine automatically vents air through the carburettor - as the float drops in the chamber, more fuel enters and any air escapes - but a diesel can't do this as it is a sealed system - any air means trouble - big trouble.

It is best to renew the entire fuel piping, lift pump and

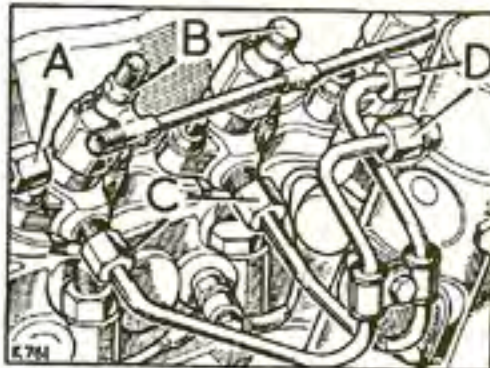


Fig. A2-30. Injector fuel pipes arrangement
 A—Disconnect spill pipe here
 B—Slacken spill pipe fixings at injectors
 C—Disconnect pipes at injectors (4 off)
 D—Slacken pipes at distributor pump (4 off)



Fig. A2-16. View of engine, RH side
 A—Fixing for spill pipe return
 B—Disconnect accelerator linkage at clip
 C—Electrical feed to heater plugs
 D—Fuel pipe to fuel pump
 E—Fuel return pipe
 F—Oil pressure switch lead

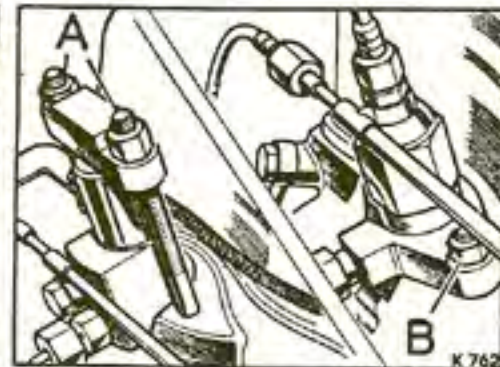


Fig. A2-31. Fuel injector fixings
 A—Early type, fixings at clamp bars
 B—Later type, fixings at injector flanges

pickup system. Get a new lift pump with a filter bowl - it's a handy guide to trouble as you can see the fuel going through! The lift pump by the way is the one on the side of the engine and sucks from the tank and then gives the fuel pressure to run the rest of the system. The bulkhead filters are ESSENTIAL and should come with the engine. Some engines have two, a sedimenter and a filter, but unless you are going to Africa, you really only need a filter!

The spill return can be connected to the old petrol pipe and the end spliced into the filler breather with a couple of 1/4" bsp fittings from your pipe line stockist. Use a new fuel pipe and pickup and install with PTFE jointing tape and great care to keep everything clean. When you have finished, there must be NO air coming back down the spill pipe. Your workmanship here will give you a reliable vehicle or a heap of trouble.

When you have the engine running, immerse the spill return pipe end in a jar of fuel and watch. At tickover you have a VERY good pressure and the fuel belts out of the spill pipe, and while you may not see much air, almost any continuous amount means problems under load. The occasional bubble drifting out is no worry, but any steady flow means you must find the leak and fix it. Bubbles are most easily spotted at tickover but you are unlikely to have problems with air at low outputs, so don't be fooled!

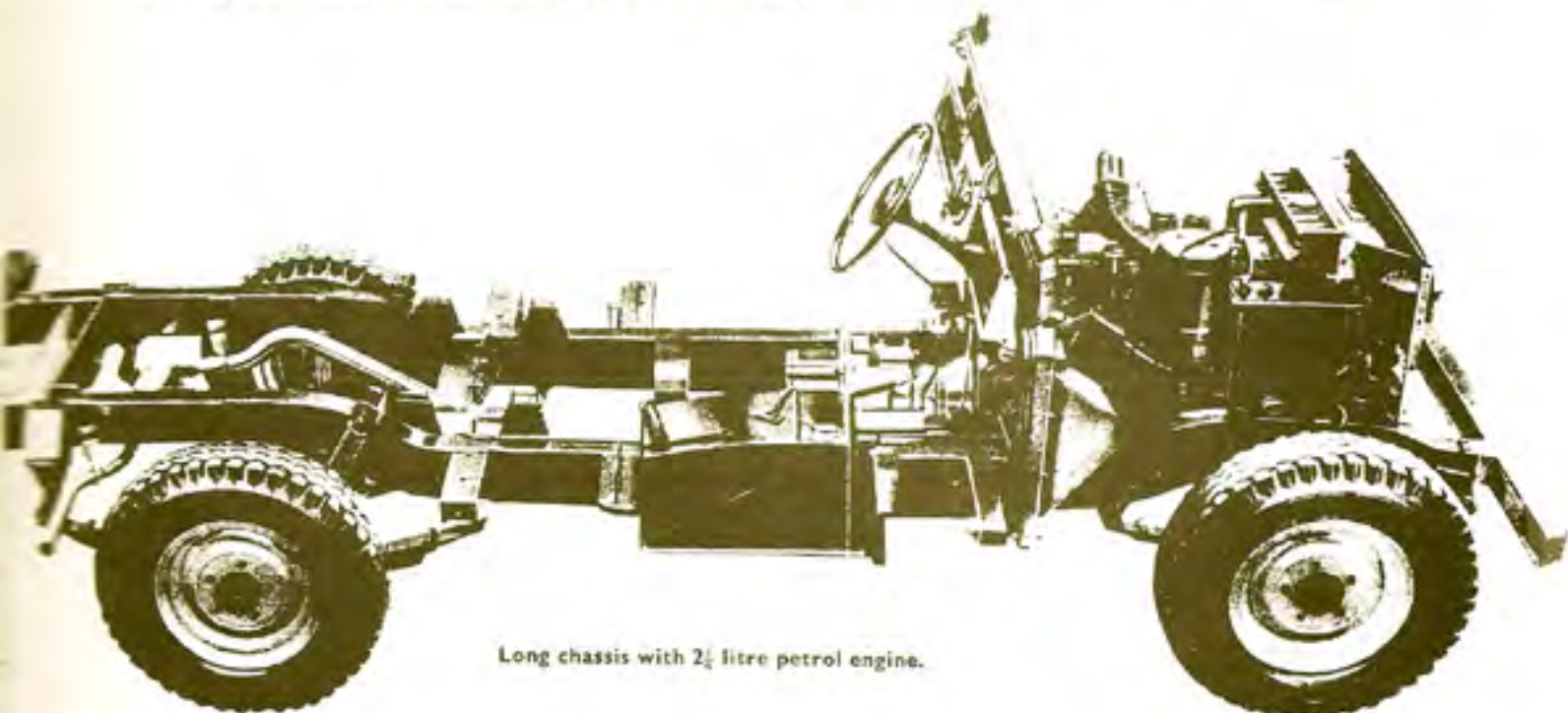
As you increase your power output, the engine takes more and more fuel, there is greater suction on the fuel pipe, so any leaks get worse, and as engine consumption increases less is returned down the spill pipe, so there is less return flow to get rid of the air and send it back to the tank. A self fulfilling prophecy no less! The pump should be able to keep a good pressure, but if there are leaks it can't - hence fuel pressure in the filter head tends to drop at the very time it is required and air getting in is drawn into the engine rather than forced into the return pipe. One trick used by cowboys to cure air leaks is to drill out the filter spill bungs bolt hole. This is VERY small and while it works by letting more air return from the filter to the tank, it does so by letting more fuel go as well, reducing the fuel pressure available to the injector pump. If too big, and there is very little margin on the 2286, at full power, the fuel lift pump can't keep up and you eventually begin to draw fuel for the engine from the spill return pipe, back into the filter. Air then enters the injector pump, everything goes quiet and you can hear the radio again.



I've had this on our forward control - the engine only failed after several minutes at full power - round town was no trouble as every time we backed off the throttle, the volume of returned fuel increased and the system re primed itself - but give a long hard pull and there was trouble - eleven times in a week before I found the problem, the best being while crossing the main runway at a busy RAF base - you get religion very quickly when there's a Hercules coming onto finals and you hear the dreaded engine knock start! The thought of holding up the R.A.F. did not really appeal, but we made it - just!

Symptoms of air in the fuel are increased power, a sudden increase in knocking and then silence! To cure you must bleed the main filter by slackening off the banjo, then bleed the lower screw on the injector pump and then the upper one which will spray diesel everywhere. There is no alternative and you should carry the tools on board all the time - and you'll need a good battery as you have to crank for some time if you have a bad case of air leakage! Seriously, fit a complete, new, Land Rover fuel system - it isn't worth doing otherwise!

One final point. Diesel can freeze in winter. It forms a wax which clogs the lines and the filters. If you don't use your vehicle much, you may have 'summer' fuel in the tank. A small dose of petrol can help, so can paraffin, but the best solution is to ensure that you don't have exposed fuel pipes which can super cool or 'wind chill' the fuel. Not a problem on 88" but it is on the 109" and a serious risk on the forward control with the open chassis. But don't route the pipes near the exhaust to keep them warm!



Long chassis with 2½ litre petrol engine.

***There's no substitute
for the 4-wheel drive***

**LAND-
ROVER**



A 1977 6x6 Range Rover 'rapid response vehicle' at Yeovil Festival of Transport in August.

Member, Clive Elliotts superb Shorland Armoured Land Rover, also on display at Yeovil. The result of a lengthy and painstaking restoration. I'm never quite sure if its safe to approach with those missile pods open !. A vehicle that is not often challenged at roundabouts !!.



Northern Notions. Northern Branch Report. Roger Horne.

It has certainly been a busy summer for the Northern Branch - something on nearly every month! Having survived the "Shows" season we got stuck in to a few of our own events -

On the 18th & 19th September we held our camping weekend at Snowgatehead, near New Mill, Huddersfield. This was kindly organised by Sue & Hedley, to whom many thanks, and comprised a green lane drive on the Saturday, followed by barbecue in the evening. On the Sunday we were able to hire a quarry for some private offroading. The green lanes were around some of the best "Summer Wine" country and led by Les from the Yorkshire Rover Owners Club. Apart from some interesting offroading along public rights of way, we were treated to some local knowledge like an introduction to a wind generator, the effects of a blocked mine drain upon nearby houses (it floods them) and how to cope (legally) with blocked public rights of way with the blessing of a National Park Ranger! The weather was superb and the sunset was hardly noticed when Paul Thompson fired up his generator and turned approaching night into day for the barbecue. Later we had the added entertainment of a firework display entirely free of charge. This may have been because we were on top of a hill watching it twelve miles away, but it was appreciated anyhow. Thanks again Sue & Hedley and to Les for a great day.

Two weeks later saw that annual favourite of the Northern Branch, the Llama Trophy (so called because it has nothing to do with llamas) This light hearted treasure hunt/quiz is the Northern Branch only competitive event of the year & I would like to say that members roared in from all points north of Watford and south of Hammerfest - however.. I cannot as, truth to say, it was rather poorly attended and I think the membership once again reminded us that going long distances in a Series II to an event, and later home again, is more than many of us can stand!

Those that managed the journey as far as the Thurlstone Moors really enjoyed the driving skills test, observation and navigation challenges of the day and I am glad to announce that Sue & Paul Hanbury were the eventual winners of the magnificent prize of setting next years Trophy competition. Oh yes, and they did receive a real little trophy as well and those fancy certificates too. Thanks once again to Sue & Hedley for organising the Llama this year (as they had won it last year!) Judging by my scores to date I think I may never have to organise it again.

The last show of the year we attended was Langley (formerly Top) Farm - a sort of a mini Billing held in the North. I must say it gets better every year and there are now many who have great respect for the offroad course builders. We set up the Club stand and information point and the shop did some brisk sales. It was good to see members old and new there and we signed up a few new members as well.

And so we are now into Winter again - time to check out your Series II in time for the snow but also to think what you would like YOUR Club to be doing next year. We are always open to ideas and I would be glad to hear from anyone who has something specific in mind. Even if you think it sounds stupid dont be backward in coming forward - some of us are fairly stupid anyway!



A tour of 'The Majors Back Garden'. Chris Lippitt.

Recently the Midlands group were fortunate to have the opportunity to have a guided tour of the grounds of the Eastnor Castle Estate, home of Major Hervey Bathurst and family, and long established proving ground for Land Rover products over the years. (Ed.) Chris Lippitt reports.

On arrival we found that conditions were very muddy in places, which of course added to the fun. Everybody mucked in when the going got sticky. Halfway round the tour an impromptu pit-stop was needed to change my flat tyre. It had started deflating not long after the start. We travelled over many of the tracks around the estate during the tour which lasted for around 2 hours. At the close of play the Major was presented with a bottle of Scotch and a svitese model was presented to the Club member who had travelled the furthest. Thanks to everyone who came along and helped to make the day so enjoyable.

GREEN LANING
Midlands Branch Event
January 9th



Malvern Motoring Event

Helen Lippitt.

Reasonable weather blessed the event this year, both on the Saturday and the Sunday. On the Sunday we had eight vehicles on the stand including a new member with his early Series 2 recovery vehicle. This was the best supported event in the Midlands so far :- thanks to everyone who attended, we hope to see you all next year at future events.

South West Group.

Camping Weekend.

As this is my last newsletter as Editor and with an eye to concentrating more time to hopefully having more events for the South West Group in '94 I have apportioned a completely unfair amount of space for the regional report; and "why not" as a famous film critic would say.

September saw some hardy members from as far afield as Manchester and Swindon head to the hills, namely Exmoor, for the second SW camping weekend this year. Despite the risky timing of the event weatherwise, we were fortunate in having glorious Autumn sunshine for the duration, apart from a shower during the night. This resulted in some haggling with the site owner after hastily having previously offered to pay extra for the provision of good weather. This was to be a one night stay this time as some of the members had other commitments on the Sunday.

Saturday saw the arrival for the day of Ross and Gill Floyd joining Paul & Alison, Greg, Tony, and Rose with myself. We set off along the Exe valley for what turned out to be a very interesting days off-roading including a bogging for both our vehicle and Tony wright. What seemed a straightforward recovery at first turned into an object lesson in the use of ropes and high-lift jacks. The main problem being the very soft ground which we had not covered on previous forays. The nice thing about being in a group is that you can afford to try some of the more testing ground without the risk of being stranded.



South West
Camping Weekend,
in September.

Greg Rayner
entering a
stretch of
the river
section.

BOGGED !.
Tony Wright,
often the
South West
trailblazer
with his
trailing
experience,
prior to
extrication.





On arrival back at camp around tea time it was time to light up the barbecue, which took rather longer than usual as someone had forgotten the diesel to start it in the usual manner (apologies again everyone).

Sunday morning dawned bright again so we made the most of it and ventured off again up the valley, seeing some Red Deer on the way. Then it was off for a drive around the Exmoor roads taking in some of the local tourist hot-spots, which were quieter at this time of year.

Peter Lamb.

CLASSIFIEDS

Land Rover Recovery Vehicle.

1966. Reg; LRC 676D. Professionally converted with recovery crane, electric winch and tow-pole with spectacle lift. Twin rear wheels. £900. Tel, 0782 303188 or 0204 709944. Staffs.

1958 2 1/4 88" Series 2 Hardtop.

46,000 miles from new (genuine). Never left Yorkshire area since built. Two lady owners from new. Contact Owen West, 44, Spring Cottages, Back Leeming, Oxenhope, Haworth, Keighley, Yorks, BD22 9NL.

1962 LWB Safari 12 seater.

Been in same family for the last 25 years. Well maintained. Extensive work carried out over the years including new chassis, engine, doors, door posts. Excellent condition. Please write for full details. Mrs Pat Hubbard, 10 Park Close, MT Tabor, Halifax, W. Yorks, HX2 0RG.

1967 Safari LWB Diesel.

Fully reconditioned 2.2 litre Diesel, excellent mechanics, good chassis, no tax or MOT, must sell as spaced needed, hence £500. May break so offers considered for engine and other parts. Tel, 051 653 9434, evenings. Mr Hughes. (Wirral).

Series 2A Station Wagon.

7 seater, petrol, Fairley overdrive, 1970, Marine Blue and Limestone. Graham Warren, 0793 790408, (eves) or 0793 814800 (days). Wilts.

Early 2 litre Series 2.

Chassis no; 141801150, 1958 SWB. Originally purchased by the Somerset Fire Brigade for recovery/support duties. reluctant sale. Tel, 0430 268631. Michael Norris. (Hants)

Dunlop radial 'Mud Rover' tyres, 8 ply size LT 255/85 R16 on 16x7 JH2 x 33 wheels. set of 5. Tyres and wheels virtually brand new condition, £225 for set, or £55 each. Would consider swap for set of proper wheels for Series 2A. Tel, Luton 599979.

**There's no substitute
for the 4-wheel drive**



By Appointment
to Her Majesty Queen Elizabeth II
Manufacturers of Land-Rovers
The Rover Co. Ltd

**LAND-
ROVER**

**PETROL
or
DIESEL**

THE ROVER CO LTD SOLIHULL WARWICKSHIRE & DEVONSHIRE HOUSE PICCADILLY LONDON

SERIES TWO CLUB CALENDAR 1993/4

Items in bold are events organised by the Club for its members and guests, the other dates are items that may be of interest to members, in most cases a Club stand will be arranged, if you intend to go to any of the non-Club events and are interested in exhibiting your vehicle please contact the club as soon as possible at the P.O. Box so that arrangements can be made (enclose a S.A.E.)

'OFF ROADING' - Please bring with you your Club Membership Card.

* This denotes that the 'off-roading' may be unsuitable for restored vehicles

- December 5th Sunday Christmas get together including lunch for the South East Branch, Jo Cotton for details on 081 840 2462.
- December 11th Saturday Northern Branch annual planning day for the forth coming year. Informal get together at the Lamb Inn, Hayfield Road, Chinley, Stockport at 12 noon. Roger Horne for details, tel 0298 83328.
- January 9th Sunday Provisional date for green laning near Worcester, weather and conditions permitting. Numbers are limited so contact Helen & Chris Lippitt on 0905 427966 as soon as possible.
- January 15th Saturday Park 'n' Eat at Wapping Wharf on the Bristol quay side followed by 'off-roading' in Brockley Woods. Details from Juanita Glass on 0749 675425.
- March 14th Saturday Days green laning organised by the South east Branch. Further details from Jo Cotton on 081 840 2462.
- March 12th Saturday Park 'n' Eat on the Bristol quay side followed by 'off-roading' in Brockley Woods. Details from Juanita Glass on 0749 675425.
- April 10th Sunday Easter Rally at the Beach Lawns, Weston-s-Mare. A show of classic cars and vintage engines with stalls and second hand parts. Date to be confirmed.
- April 16th Saturday Annual A.G.M. to be held at Brookhouse Green Primary School, Bucknall, Stoke-on-Trent. (an estimate of numbers will be needed nearer the date for catering purposes). Details from Paul Hanbury, tel 0335 346103
- April 24th Sunday Lunch meet on Priddy Green. Off-roading* in the afternoon. Camping available. Full details from Simon & Nita Glass on 0749 675425.
- May 14th Saturday Park 'n' Eat on the Bristol quay side followed by 'off-roading' in Brockley Woods. Details from Juanita Glass on 0749 675425.
- May 15th Sunday Meeting at the Heritage Motor Centre at Gaydon, Warwickshire. Entry charge of £4 for adults & £2 for children (represents £1 off normal charges). An exciting collection of over 300 vehicles, lots to do and see for all the family, including an 'off-road' Land-Rover ride. We will display the Land-Rovers in an area in front of the museum, so we are hoping for a good display. Sorry, no dogs allowed in the arena. An excellent venue, well worth a visit. Contact Helen & Chris on 0905 427966
- May 28th & 29th A.R.C. National 1994. To be held near Belper on the edge of the Peak District National Park in Derbyshire.
- June 25 & 26 By popular request, barbecue at Rookham Farm on saturday evening. Off-roading* ALL DAY sunday. Camping available all weekend. Full details from Simon & Nita Glass on 0749 675425
- July 22nd - 24th Billing '94 at Northampton. They claim to have the best show for Land-Rovers in the country.
- OCTOBER Provisional off-roading/social gathering at Brockley for Halloween. Full details from Simon & Nita Glass on 0749 675425.

If there are any events happening in your area that you feel would be of interest to other members which is not mentioned above, please let me know and I will try to include them in the next edition.

N.B. The use of a Public House or Inn for an event meeting place is for convenience only as most are recognisable landmarks and have suitable facilities. It must not be seen as encouragement to drink and drive.



ITEM 2

CLUB SHOP

All orders & correspondence to:
 Series Two Club Shop
 Paul & Alison Thompson
 1494 Ashton Old Road
 Manchester M11 1HL

All prices INCLUDE post and packing to UK mainland destinations. For Europe & Overseas please add 50%. Due to our status of a limited company, these items are for sale to members only.

STICKERS: All stickers in yellow & green on white background.

- | | | |
|---------|--|-------|
| ITEM 1: | 4" square Club windscreen sticker - self cling | £0.75 |
| ITEM 2: | 9" x 3" windscreen sticker "Series Two built to last" - self cling | £1.00 |
| ITEM 3: | 9" x 3" windscreen sticker "You are following a Series Two" - self cling | £1.00 |
| ITEM 4: | 4" Club tax disc holder | £1.50 |

- | | | |
|----------------|-------------------------------|-------|
| <u>BADGES:</u> | Enamel - Front view of 2A | £2.50 |
| | Embroidered - 4 1/2" x 2 1/2" | £5.00 |



ITEM 4



ITEM 1

PUBLICATIONS:

- | | |
|---|------------|
| Servicing chart (A4 size). Owners handbook reprint | £0.50 |
| Diesel engine priming and filter information. Manual reprint. | £0.50 |
| Chassis prints (A3 size). Line drawing of chassis, engine and transmission 88", 109" and Forward Control. | Each £1.50 |
| Forward Control IIA information pack (Technical Supplement) | £3.00 |
| Back copies of newsletter - contact editor via PO box. | |

- SHIRTS: Green shirts with yellow print - Club logo and large Series Two 88" soft top.
- | | |
|---------------------------------|--------|
| T-shirts Small | £5.00 |
| T-shirts Large & Extra Large | £6.00 |
| Sweatshirts Large & Extra Large | £12.00 |
- MUGS: Quality earthenware mugs with two colour logo and Series Two 88" soft top £3.50
- MODELS: ERTL Land-Rover 110, 3" long, green with full tilt. £1.25
- OIL FILTERS: Series II paper element (long) RTC 3185 £5.50
 Series IIA paper element (short) Coopers £3.00



ITEM 3



INSURANCE?



TURN TO THE 4 WHEEL DRIVE INSURANCE SPECIALISTS

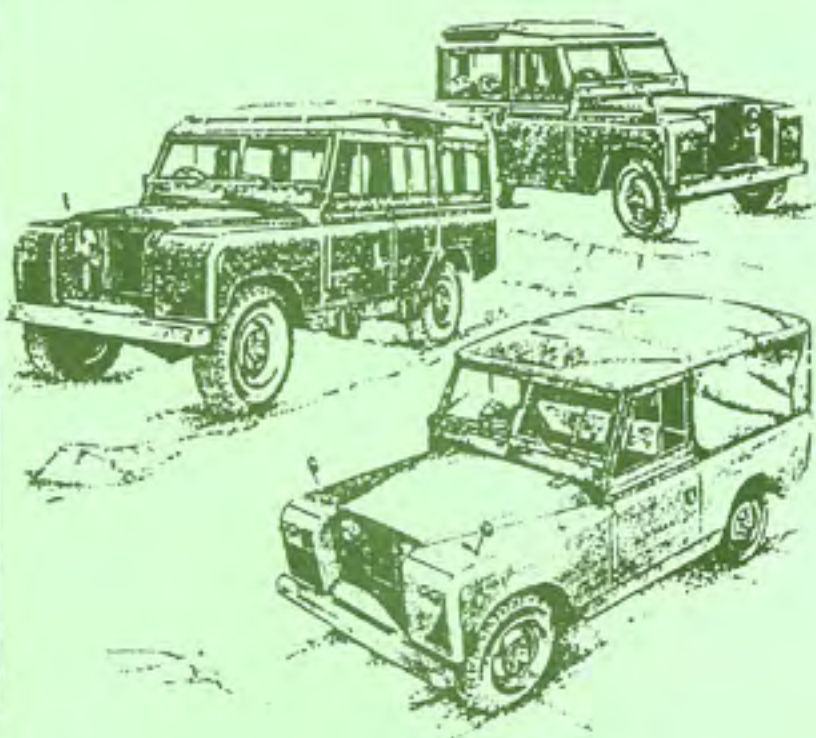


INSURANCE QUOTES

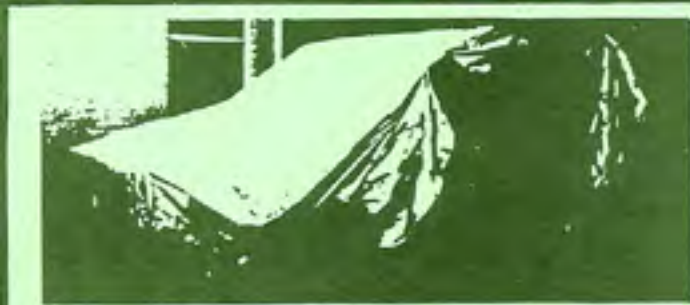
TELEPHONE (0283) 31391

59 60 WETMORE ROAD, BURTON UPON TRENT, STAFFORDSHIRE DE14 1SN

SERIES TWO CLUB



Protect your Series Two...



Outdoor Standard
Polyester woven textile with anti-UV treatment, lightweight, smooth, high water resistance, breathable, elasticated all-round hem, underbody straps.

In-Garage
Dustproofed nylon textile, breathable, elasticated both ends.

	Outdoor Standard	In-Garage
Series 2 88"	£78	£54
Series 2 109"	£84	£57
Other Land Rovers we can supply covers for:		
Series 1 80" / 86" / 88", Series 3 88", Ninety	£78	£54
Series 1 107" / 109", Series 3 109", One Ten, Range Rover	£84	£57

- All our covers have a protected driver door zip, (shown open in pictures), and all are supplied with a carrying bag.
- Please ask if you want a cover for another make of car. We can cover cars from 11'0" to 20'6" - Saloons, Estates, Hatchbacks, 'small boot' and 'bootless' pre-war cars.
- ALL PRICES INCLUDE VAT AND DELIVERY.

NB: Covers have an entry zip on both sides.

COVER SYSTEMS **Car Covers**



COVER SYSTEMS (UK)
46 Little Street, Rushden, Northants
NN10 0LS Tel: 0933 410851



Land Rover Owner – the only magazine for Land Rover & Range Rover enthusiasts.

Every month at
newsagents £2.25

or, available by subscription from
LRO PUBLICATIONS LTD.,
THE HOLLIES, BOTESDALE, DISS,
NORFOLK IP22 1BZ
at **£27.00** for 12 issues

Take an annual subscription and we will send you FREE either: an L.R.O. T-Shirt or a Magazine binder.

- Twelve issues of Land Rover Owner for just £27.00 - post free and avoiding possible price increases.
- Free membership of LROC (Land Rover Owner Club) - personal membership card means many extra discounts.
- Send a cheque today and get the next 12 issues of your favourite magazine delivered to your door.
- Membership of the International Off-Road Club.

Please send me the next twelve issues of Land Rover Owner, starting with the..... issue and enrol me as an LROC member.

I enclose cheque/PO for £27.00 (UK) .

Charge my Visa/Access

a/c no.

Expiry Date

Send me a free

Post your complete form to:
LRO Publications Ltd.,
The Hollies, Botesdale,
Diss, Norfolk IP22 1BZ

(enter choice of gift)

Name

Address

Signed

Date

• Overseas rates available on request.

Prices valid to 30th September 1993.