ROVER OWNERS' ASSOCIATION

OF NORTH AMERICA

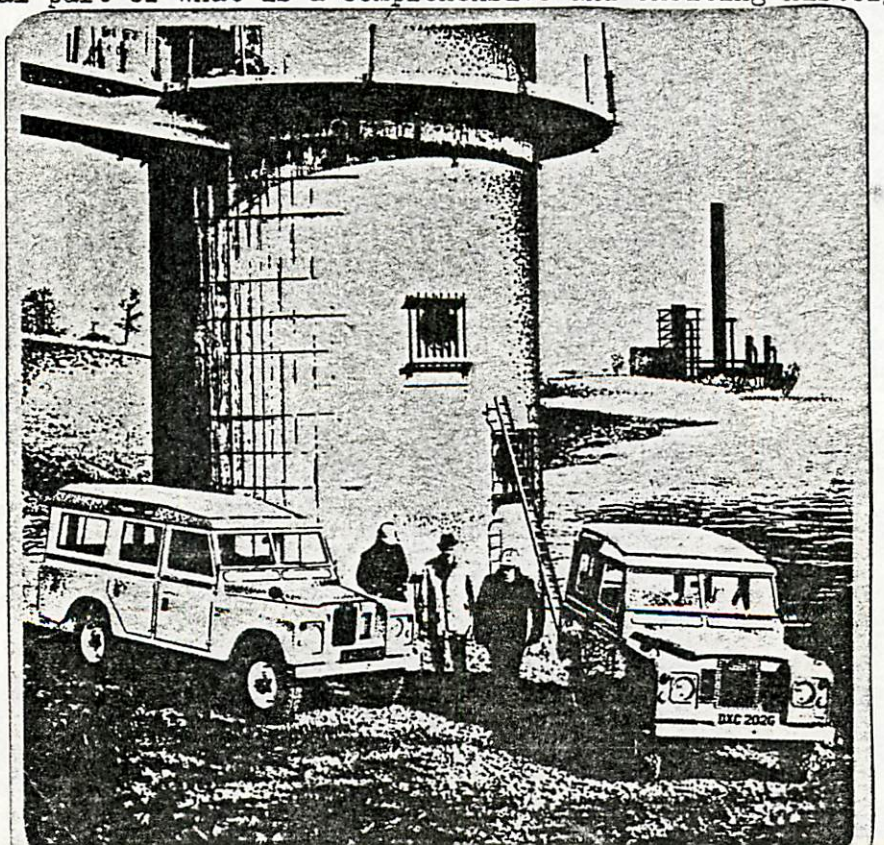
167 Oakland Road
Maplewood
New Jersey 07040

Volume V, Number 4 November, 1976

On this issue's cover of the Newsletter we have reproduced in black and white the color jacket which appears over a new book entitled, The Land-Rover: Workhorse of the World, written by Graham Robson and published by David and Charles Publishing Co. of Newton Abbot, England. We have been in contact with the U.S. distributors of the book in the hope of offering it to the membership at a SPECIAL DISCOUNT. It is available as of September 1976 in this country at $12.95 retail. Because of the Association's efforts it is now available to the membership at a 20% discount - the price is $10.50 post paid from the Association. We have offered the membership items of interest before with a not particularly large degree of success. Since this book represents something of particular interest to our membership and at substantial savings we urge all members to participate and order their copy now. With the U.S. Parcel Post being what it is orders intended for Christmas gifts should be ordered as soon as possible. Please make all checks out to: Rover Owners' Association of North America.

The publisher's inner jacket notes follow:

> The Land-Rover has become an institution: it has entered into the language as a term for maid-of-all-work or, as Graham Robson puts it, "workhorse of the world". It is a vehicle that has won the hearts of its owners in most countries. This is the first complete history, which comes out in the year when the millionth vehicle comes off the assembly line, and it is a fascinating story.
>
> Conceived as a stop-gap to help its manufacturers through post-war austerity and shortage of materials, within two years it had become the company's mainstay. As the farmer's friend it was very soon being used in spheres too numerous to list. Although this success might appear to have been ordained by a fairy godmother, there was, of course, much drama behind the scenes. Graham Robson chronicles the prototypes which were abandoned as well as the models that have become so familiar, tells us of how many projects changed shape and how many special models came to be built. A separate chapter covers the developments made for the armed services and another is devoted to the luxurious Range Rover. This is a human story and the author never overlooks the engineers who made this modern industrial success possible - an essential part of what is a comprehensive and exciting history.



Some Inquiries and Suggestions: Member Andrew Goldfine has asked us to print the following questions; he owns a 1973 Land-Rover Series III and is interested in what other Land-Rover owners' experiences may be withtheir vehicles.

- How to improve windshield wiper contact and performance at high speeds and in high winds?
- What the cost would be to convert a Lucas 16 ACR alternator to a 20 ACR? What parts would have to be changed and what would they cost if ordered from Lucas?
- I would like to raise the suspension about 1 or 2 inches. Are coil over shocks available anywhere that will fit on, and if so, are the studs that the shocks fit on strong enough to support a portion of the vehicle's weight without bending? Has anyone had the spring re-arched to provide this effect? Has anyone had a thicker main leaf made and substituted for the original leaf? Did this raise the vehicle?
- Has anyone removed the bulkhead behind the seats and fabricated a brace similar to that which comes on the 109's? This would make it possible to sleep inside am 88, with modifications to the seat cushion arrangement. If anyone has done this, how has the rigidity of the body been affected?
- I would like to know how to build or install roof vents or roof hatches.
- I have never been able to install the oil filter canister so that oil doesn't leak out around its rim. I would like to know how to eliminate this leakage?
- How much does it cost to convert to a Positraction rear differential? Can the same carrier and ring and pinion gears be used?
- Have any other members reduced the transmission whine or sound-proofed the body with carpets, etc.? How noticeable has the reduction in sound level been?
- Has anyone with an 88 used 9.00 x 16 military style tires? This type of tire is about 36" tall and would require some suspension modifications. I have seen them on a 1 ton 109. Has the change in overall gear ratio caused any problems? Is 1st gear, low range still low enough for all situations? Can the 2¼ litre motor pull these tires in off-road situations? on the highway? How was the suspension raised? Was clearance for the turning circle effected?
- Has anyone been able to improve the door locking mechanism on the Series III's? If not, has anyone developed an alternate method of locking a Series III securely?
- Has anyone tried the Clifford Research exhaust headers for 2¼ litre Land-Rovers? How did they go on? How well do they work?
- Has anyone rolled a hardtop Land-Rover with or without a roll bar? I think a description of the conditions of the roll and the damageit caused would be of interest to many Land-Rover owners. The same applies to Rovers involved in collisions.

Burning Valves on the Land-Rover: Member James F. Gast recently wrote us the following letter.

I have been a mechanic for seven years and have owned a 1963 Land-Rover IIa 109 Station Wagon 2¼ litre since 1972. I have put over 100,000 miles on it, including 12,000 in the Yukon and Alaska. Included in that 100,000 miles is thousands of high speed West Coast freeway miles spent getting to back country. I did a valve grind and engine rebuild when I bought the Land-Rover and have never had any valve trouble.

I have worked on numerous Land-Rovers in the past seven years and have found two problems that occur with some frequency that were not mentioned in the Newsletters. The first concerns the valve train. When grinding the valve seats every head that I have seen that had a burnt valve had the seats incorrectly ground. A correctly ground valve seat is approximately 1/16" wide with a 15° and 60° upper and lower cut to keep the carbon from building up, which in turn causes the valve to burn. Contrary to public opinion most machine shops do not go to this much trouble and on a Land-Rover it is very critical that this is done.

The other problem that occurs in the pre-1970 models is faulty centrifugal advance in the distributor. This problem causes tremendous lack of power and often goes unnoticed. The weights in the distributor rust up and will not advance. The problem is solved by completely dismantling the distributor, cleaning all the parts and reassembling. It sounds easy but any Land-Rover that lacks power at the top end and backfires on deceleration (including breaking exhaust manifolds) could have this problem. The Land-Rover engine must have full advance both centrifugal and vacuum for it to perform efficiently.

If anybody has mechanical problems with their Land-Rover and would like consultation I can be reached at my business or home. I am a dedicated Land-Rover owner and am interested in any Land-Rover service problem.

Business: Jim Gast
c/o Chuck's Union Service
90 El Camino Real
San Carlos, California, 94070
(415) 591-3677

Home: Jim Gast
276 Kelton Avenue
San Carlos, California, 94070

Another Solution to the Land-Rover Wiper Blade Problem: Member N.W. Lineback offers the following advice for the afore-mentioned problem. Use an ANCO #325 as the replacement blade. The mounting device modification is as follows:

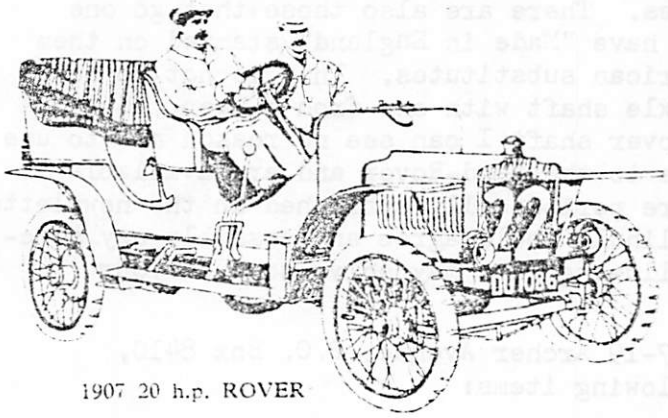
- break the original blade in half and remove the mounting bracket; use this as an adaptor (leave the rivet in place).
- attach the #325 blade to the rivet on the bracket.
- install the modified #325 on the wiper blade arm.

Cost of the ANCO blade is about $3.75.

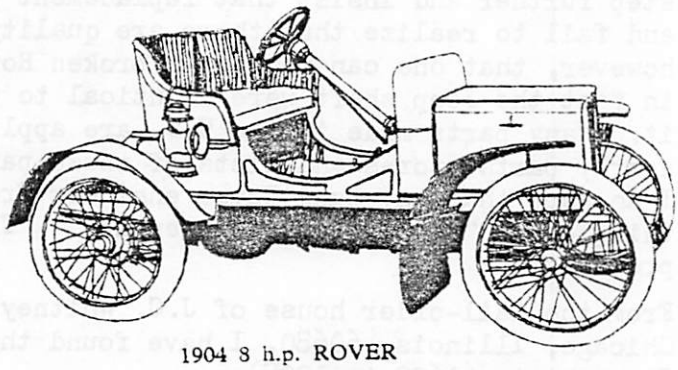
Australian Land-Rovers: After years of experience with Land-Rovers in various roles, the Australian Army has ordered 2100 more in five versions, and this means $14 million to Leyland Australia. Mr. Frank Andrew, General Manager of Leyland Australia, said that the new Land-Rover would mean a gradual phasing-out of those already in use. The Army has so far operated 3500 of the vehicles. He added: "This contract means a great deal to several Australian companies, not just to Leyland Australia. The tires, batteries, glass and aluminum rustproof when we produce the panels, are all made by Australian companies under contract to us." Mr. Andrew said that the competition was strong from European, Japanese, and American manufacturers of four-wheel drive vehicles. Leyland was the only one of the tenderers with an established programme of local content in the manufacture of such vehicles. The current local content of the Land-Rover is 60 per cent. "There is a lot of life in the basic Land-Rover concept. At present, we are examining adaption of the vehicle which could find a ready market among the Australian public.

Notes from a Land-Rover Owner (continued):

Heater: For those owners who do not have a stock heater, the heater from a small import, E.G. Toyota Corolla, is ideal. The heater is small and its supports can be bent to fit a front floor mounting or a nice rear heater. This heater can be purchased at a junk yard for a small fee.



1907 20 h.p. ROVER



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FAIREY OVERDRIVE WARNING: The following article appeared in the April, 1976 issue of "Landroving", the magazine of the South Australian Branch of the Land-Rover Owners' Club of Australia. Acknowledgements must therefore go to David Camilleri of that club.

Further to my report on the Fairey Overdrive in the last magazine, it appears that all units are not alike. However, out of the twelve I have personally road tested, eight were noticeably noisy in overdrive. The tendancy is for those fitted behind a six cylinder engine (Land-Rover or Holden GM) to be quieter, although at present this has no logic, as the gearboxes are exact in every aspect except for the bellhousing.

To all Fairey owners, may I say "BEWARE, CHECK YOUR OVERDRIVE NOW." It only takes about fifteen minutes to remove and replace the unit, and could be very worthwhile.

After another 5,000 km., I have found the rear spiggot to be binding again, lightly damaging the mainshaft, and leaving a rusty-colored, powdered residue in the spiggot. Although I had thoroughly cleaned and repacked the spiggot area with high quality grease the fault has re-occurred. On the spur of the moment, and at close hand, I inspected another unit with similar mileage and doing the exact thing. If you find that this has happened to yours, please let me know so that I can evaluate the units for "Club" knowledge. Remember that even if the unit was to cost only $300 it would cost approximately $80 for a new mainshaft, without the 11 hours labor to fit it, plus, if oil contamination occurs in the transfer case, more damage may result.

Through experience, a quick check is to compare the colors of the gear oils of similar mileage. The gearbox oil should match the transfer case color. If it is dirty and dark brown I would suggest you check the unit IMMEDIATELY. At the last club night I received a report that another unit was suffering the spiggot problem and was also in pieces due to gear failure. So I strongly suggest that club members hold off purchasing overdrives until facts are correlated through those already in use.

The Association plans to keep in contact with our friends in Australia in order to see the outcome of their experiences. At this point, we haven't heard anything negative regarding the Fairey units on our member vehicles. If anyone has had any difficulties please advise. Also, we would like to hear from Bill Hubert of Atlantic-British, the North American distributor of the Fairey line as to whether he has had any difficulties in this area.

Notes from a Land-Rover Owner: Member James M. Whitcomb of Severn, Maryland recently wrote the following letter to the membership:

This is my first letter to the club members and I do not intend to offend anyone but at times, when talking to other owners, I find that most are perplexed, as am I, with parts sources and prices. More than this however, most Land-Rover owners have become so infatuated with the concept of the Land-Rover ("toughest thing on four wheels") that when it breaks down it bursts their bubbles. There are also those that go one step further and insist that replacement parts have "Made in England" stamped on them and fail to realize that there are quality American substitutes. This is not to say, however, that one can replace a broken Rover axle shaft with one from a Jeep. But if in fact the Jeep shaft were identical to the Rover shaft I can see no reason not to use it. Many parts made in the U.S. are applicable to the Land-Rover and are available at nearby parts stores and lists of these parts are periodically published in the newsletter. I am sure that any Land-Rover engineer from Solihull would agree and possibly say something about "bloody Yankee ingenuity." The following list may solve some of your problems:

From the mail-order house of J.C. Whitney, 1917-19 Archer Avenue, P.O. Box 8410, Chicago, Illinois, 60680, I have found the following items:
Thermostats (160° to 190°)
Selectro free-wheeling front hubs (I have had them on my Landy for three years with no trouble)
Bolt-on steering stabilizer kit ($14.00)
Fiberglass fans (lighter and more efficient than metal)
Gauges, shocks, re-shoeing kit, brake shoe material, and tools
Weather stripping and window channeling

Gaskets: Having trouble with gaskets shriking and getting old and leaky? Try Permatex Gel Gasket; it will solve the problem. It's great for leaky Warn hubs or where two metal surfaces meet. Permatex Gel Gasket comes in a tube ($8,00 for a large tube goes a long way) and goes on as a gel where your regular paper gasket would go, but when the part is bolted together the gel cures hard as a rock and flows into the small surface imperfections that a paper gasket cannot seal. I would recommend this for use on parts other than high temperature engine applications such as valve covers, although Permatex does make a product just for such engine purposes that stays pliable and works rather well. Permatex also makes a product called Lock Tite that makes nuts and bolts vibration proof - ideal for the Land-Rover. These products are available at most auto parts stores and although they are a bit expensive for the small amount that one buys a little bit of the product goes a long way and not having to worry about those leaks solves a lot of the worry and is well worth the investment.

Mufflers and Pipes: Most shops like Midas will bend you the pipes you need. Check around for your best quality for the price.

Fuel pumps: If you are about ready for a new fuel pump try an electric one. Stewart-Warner makes a nice little unit (pump pressure: 4-6lbs. sq. in). It is very easy to install and has the advantages of constant fuel pressure at any speed and it is not putting a load on the engine as any mechanical pump does. A fuel filter may be installed on either side of the pump and the stock mechanical unit can be removed and a small plate and gasket fabricated and bolted on to cover the hole. You can also install a hidden switch to make your Landy a little more theft-proof.

Interior noises: Try putting some industrial carpeting throughout the front area. This not only keeps the noise down but helps insulate the compartment from the exhaust pipe heat.

RMATION **SERVICE INFORMATION** SERVICE INFORMATION SERVICE IN

Elec. Ser. Stat. #10	Jobber/Dist. #17	M/C Dist.#	BLMC #32

DATE	3/76
LINA	5032

SUBJECT: Starters for Rover 2000 TC

Earlier production cars of this model were originally fitted with a starter model M418G, Part No 25673. Later models used a 2M100, Part No 25649. At the same time the starter specification was changed, the vehicle manufacturer began using a modified exhaust bracket, Rover Part No 6.20204. This modified bracket gave the additional clearance required by the 2M100 starter, which has strengthening ribs incorporated in the drive end bracket to give improved vibration resistance.

The original starter, 25673, is no longer available and has been superseded by 25649. Remanufactured units supplied under S2123 may contain either of the above numbers.

When installing the later starter on an earlier car, it will be necessary to file the exhaust bracket as shown in the diagram.

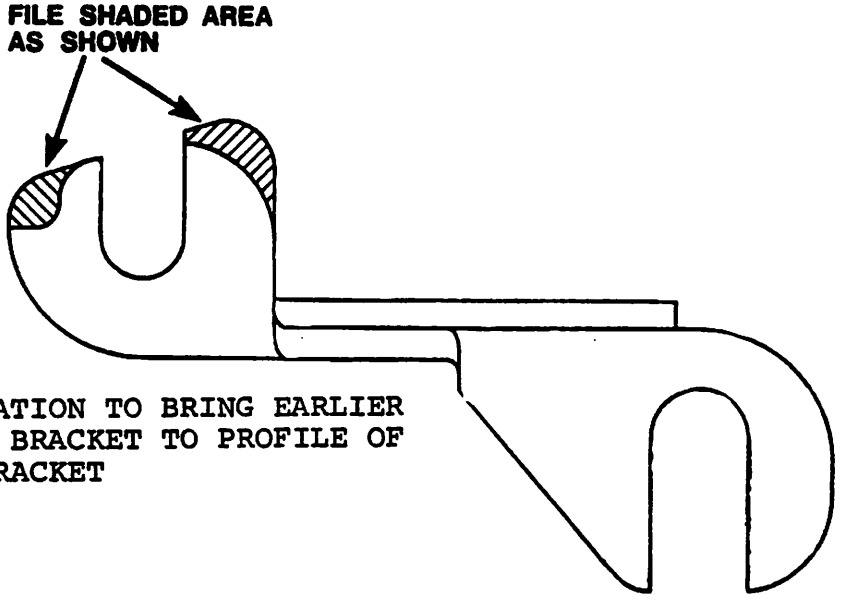


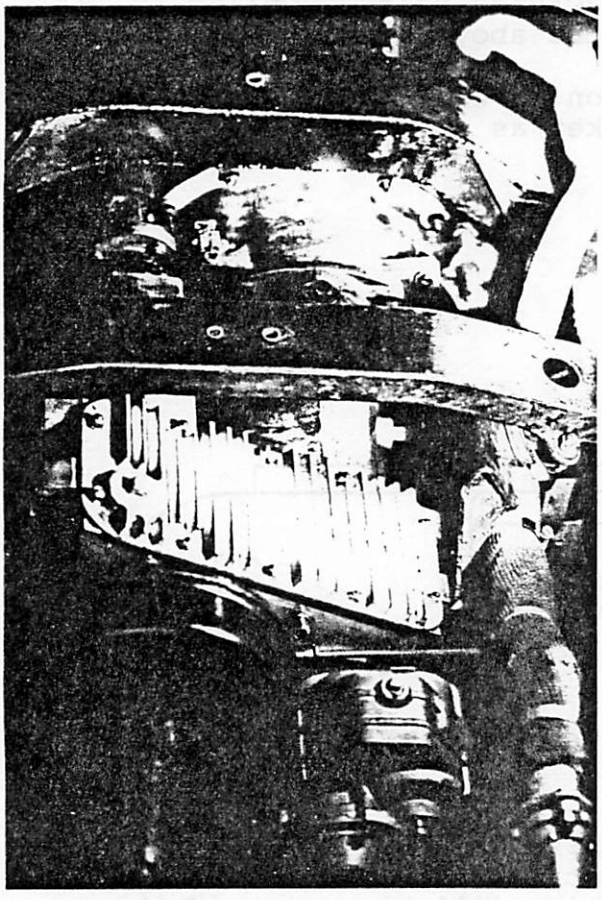
FIG. 1 MODIFICATION TO BRING EARLIER EXHAUST BRACKET TO PROFILE OF LATER BRACKET

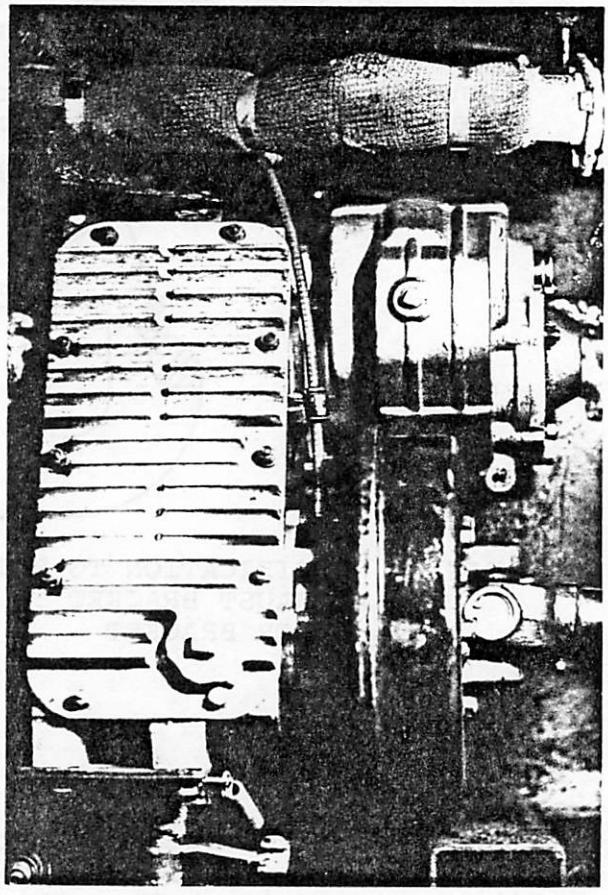
Because of the more substantial construction of the later starter bracket, difficulty is sometimes experienced in locating the top mounting bolt. This operation will be easier if the upper bolt is put through the starter bracket hole before the starter is offered up to the engine.

FAIREY OVERDRIVE: Member Albert Kamishlian of Kettery, Maine currently has about 75,000 miles on his Land-Rover. At 72,000 miles the clutch and throw-out bearing were replaced and a Fairey overdrive installed. Al gives us the following data from his experience with the Fairey overdrive:

40 mph	2400 rpm	2100 rpm (with overdrive)
45 mph	2800 rpm	2400 rpm (with overdrive)
50 mph	3000 rpm	2600 rpm (with overdrive)
55 mph	3300 rpm	2800 rpm (with overdrive)
60 mph	3600 rpm	3100 rpm (with overdrive)

He notes that any discrepancies between his rpm's and those of Thomas Gallucci's with the Fairey overdrive points up the difference between tires. Al's are 225Rx15 Michelin M & S; these grow in diameter above 30 mph. With Armstrong L78-15's the rpm's were about 200 higher. Two photos below show the overdrive installed and Al's 3/4" finned aluminum cover plate. In the same area ia an Inconel mesh which Al installed almost four years ago to keep the floorboards and surrounding area cool. This material doesn't corrode; the bulge is dirt.





Al also asked us to warn readers about ordering parts. He said that Atlantic-British sent a so-called new pressure plate which was 1/8" (.125") undersize and useless. Sefer.an Escadrille had a clutch rebuilding fixture and used my old plate which showed no wear. Al also indicated that he installed four years ago a Monel ring with Ideal thermostats. The ring is about 5/16" high. He reminds not to forget to install a new "O" ring.

One Owner's Trouble with the Land-Rover: Former member Dick Siskind of Baltimore, Maryland recently fowarded this letter to us:

Please be advised that I have recently disposed of my Land-Rover, and I must therefore drop my membership.

When I bought the Rover it was under the assumption that it was a rugged, go-anywhere vehicle that was well made and required "less looking after" than similar American-made vehicles. Obviously, I was in for a tremendous let-down, a disappointment from the start. In 2½ years and 35,000 miles I had the following difficulties:

- Two complete clutch rebuilds.
- Several rebuilds of the transfer/transmission housings to replace faulty gaskets, seals.
- Several replacements of axle seals.
- Fantastic oil leakage.
- Total and complete incompetance on the part of the dealer and his service personnel to come to grips with my Rover's problems (or the problems of most of the owners of the other English-made pieces of crap that he sells). Waiting time for an appointment for service or repairs usually was about three weeks! Not very good when you have no clutch.
- Starter replacement.
- Alternator rebuild and replacement of voltage regulator.
- Windshield washer motor burned out.
- Horn circuit shorted itself out.
- Peeling and deterioration of paint.

Shall I go on?

It is little wonder that Consumer Reports recently advised against buying any English-made cars.

The Land-Rover could have been a great vehicle in the United States. However, poor workmanship and poor dealer service killed it. This is why its sale was discontinued in the U.S.A.

I have enjoyed your newsletter and its useful tips on repairs and parts. Keep it up - Land-Rover owners will need all the help that they can get.

OTHER CLUBS:

During July, 1976 the Rover Owners' Association of Richmond was formed. Their address is: Box 209, Ashland, Virginia, 23005. They indicate that they wish to make Richmond, Virginia an oasis for Rover owners travelling north and south along the Eastern seaboard. They invite any member passing through Richmond who needs assistance or just wishes to talk about Rovers to call 266-4961 during the day, Monday through Saturday, or at night to contact one of the club officers: Kendall L. Wilson, Jr., President, 353-0382; Bennett Q. Saunders, Vice-president, 266-9376; George W. Rickman, Secretary, 746-5007; and W. Carter Davis, Treasurer, 798-7047. They have already organised a fine meet, The First Annual Virginia Land-Rover Caravan, during the week-end of September 24, 25, and 26, 1976 in Buckingham County, Virginia. We hope to carry reports on this event in a future Newsletter.

Member Richard C. Matta of Napa, California is organising a Northern California Land-Rover Club. Any member living in that area and interested in participating in a local club should contact Richard at: 3479 Twin Oaks Drive, Napa, California, 94558.

Member W.K. Hilliard of 119 Abbott Drive, Mountain Home, Idaho, 83647 is interested in exchanging parts numbers and information with other members on older Land-Rovers.

Some additional Parts Sources for the Land-Rover:

Conversion Units for the Land-Rover:

Small block Chevroltet V-8 (283,327,350, 400 cu. in) and Muncie 4-speed (M21or M22) price: $195.00 from Advance Adaptors, 12120 Woodruff Avenue, Downey, California, 90242. Kit #AA35.

Ford small block V-8 adaptor to Land-Rover transmission, $135 from: Atlantic-British, Box 109, Mechanicsville, New York, 12118.

Roll Bars:

Kit #LR208 from Smittybilt, Inc., 2124 North Lee Avenue,South El Monte, California, 91733. Price: $57.96 plus shipping.

Huskar,927 Main Street, Longmont, Colorado, 80501 admitted that their roll bar for the Ram Charger or Trail Duster will fit the Land-Rover and is priced at $79.90 plus shipping.

HEADERS:

Header # XB 106 K for the 4 cylinder Land-Rover costs $75.00 plus shipping and is manufactured by Clifford Research, 102 Kalmus Drive, Costa Mesa, California, 92626.

Atlantic-British offers header #2899 for the 4 cylinder Landy at $76.95 plus shipping.

Shock Absorbers:

4 Way, 7864 Ronson Road, San Diego, California, 92111 offers 4 Way Equalizers for the Land-Rover on request.

Member Paul A. Grayce would like to advise the membership of the existence of a book written by a mechanic who worked for several years at a mission in Liberia. The book contains a collection of hints, advice and instructions for driving and maintaining a vehicle in rough country. The range of information extends from the very basic (i.e., what is a clutch?) to the more complex (hints for replacing piston rings). There is a good trouble-shooting guide including tune-up proceedures and an excellent section on cable winches and winching techniques. Paul would recommend the book to anyone contemplating off-road travel. The book is entitled: Automotive Operation and Maintenance, by E.C. Cone and is available from: Volunteers in Technical Assistance (VITA), 3706 Rhode Island Avenue, Mt. Ranier, Maryland, 20822 for $6.50 post paid.

Land-Rover Owner Converts to Diesel: Member Jim Leons owns a Land-Rover 88 on which he had put 158,000 miles on his original gas engine. He put an ad in the Newsletter and found a rebuilt Diesel engine for sale in North Carolina from aonther member of the R.O.A. Jim installed the engine, first painting it a bright yellow, with very little difficulty. He ran the return line from the engine fuel system back to the tank using the vapor return line already installed on the gas engine. Otherwise,he would have had to install a return line to the tank. This was the only area involving any difficulty in the installation.

After 30 minutes of priming the fuel system Jim started the engine and it spun to life readily. Jim finds the diesel very impressive. He gets 35.5 miles per gallon and finds that the diesel gives a lot more rear end torque than the petrol version. His cruising speed is 55mph, or 60 mph if he's in a hurry. Fuel isn't hard to find in his area and costs around 45.5 to 51 cents per gallon so it's very economical tooperate as well.

Another highly recommended Rover and Land-Rover service source is: Grandview Imported Car Service, 49 Cedar Hill Avenue, Depot Plaza, South Nyack, New York, 10960; phone: 914-358-6886. The owner is Mr. Henry Donnelly.

FOR SALE: One dismantled 2¼ litre petrol engine for parts. Also, some body parts for 1965 109. Plus many parts too numerous to mention.
Anyone needing any assistance in mechanical repairs of Land-Rovers and Rover sedans contact: Gary Landes, 112 West Jeffrey Street, Baltimore, Maryland, 21225, (301) 354-0622.

WANTED: Heated windscreen for any year 109 Landy. Contact: Gary Landes, 112 West Jeffrey Street, Laltimore, Maryland, 21225, (301) 354-0622.

FOR SALE: 1970 Rover 3500S. Gray exterior, red leather interior, automatic transmission, Air conditioning, power steering, power brakes, AM/FM radio, electric windows, radial tires, excellent condition. Asking $2200. Contact: Harold Connelly at 215-676-9688.

FOR SALE: 1974 Land-Rover 88 Series III Station Wagon. Excellent shape. 15,000 miles, Fairey overdrive. Vehicle has never been driven off the road. Exhaust system is rusty, but other than that it is a gem. $4200 firm. Contact: Dr. Craig W. Stewart, 14223 4th Avenue N.E., Seattle, Washington. Phone: 206-362-7577 or 206-363-5284.

FOR SALE: Complete brand new, never used 24 volt system for a military Land-Rover. Includes all wiring, the 24 volt alternator, shielded ignition system with distributor. This is a fantastic buy for the owner who is into restoring his 24 volt military or for the enthusiast who has a need for the larger system that can handle up to four batteries. Write: James M. Whitcomb, 1908 Curie Drive, Severn, Maryland, 21144 for info.

FOR SALE: 1967 Rover 2000SC Automatic, 90,000 miles. Best offer. Contact: Sey Chassler, 20 Sutton Place, New York, New York, 10022.

FOR SALE: 1966 Rover 2000TC in good running condition. Contact: W.D. Brinker, P.O. Box 67, Parker, Colorado, 80134.

Above photos show two of the Rover 3500S's belonging to member Richard Michael Roberts of Mattapan, Massachusetts. Member Roberts has personalized license plates on all three of his Rovers. The third car is a 2000TC.

RENEWAL MEMBERS:

Alvin E. Babbitt	4841 E 113th Avenue Thornton, Colorado, 80233	1970 3500S, 1968 2000TC
Walter Banta	1566 West 158th Street Gardena, California, 90246	1972 Land-Rover 88 Series III
Stanley Bleeker	2405 E 63rd Street Brooklyn, New York, 11234	1971 Land-Rover 88 Series III
Anthony J. Bonanno	P.O. Box 342 Springdale, Utah, 84767	1971 Land-Rover 88 Series IIa
Robert Dugan	160-54 27th Avenue Flushing, New York, 11358	1964 Land-Rover 88 Series IIa
Dr. Lois Flynne	182 Gambier Street San Francisco, California, 94134	1973 Land-Rover 88 Series III
Ray Forgit	P.O. Box 597 Lakeport, California, 95453	
James H. Gibbs	1947 West 19th Avenue Vancouver, British Columbia, Canada, V6J2P2	1970 3500S
John E. Hanna	1580 South Monroe Street Denver, Colorado, 80210	1958 Land-Rover 88 Series I
Susan and Terry Hawker	1278 First Street Simi Valley, California, 93065	1972 Land-Rover 88, Series III
Joseph Hayden	P.O. Box 845 Galt, California, 95632	1965 Land-Rover 88 Series IIa
Keiller Haynie, Jr.	3601 Sunset Farmington, New Mexico, 87401	1967 Land-Rover 88 Series IIa
Roy B. Henderson	2632 Guilford Avenue Baltimore, Maryland, 21218	1971 Land-Rover 88 Series III
Stephen M. Hill	2645 Church Lane San Pablo, California, 94806	1973 Land-Rover 88 Series III
Dennis Jereb	5830 S. Western Avenue Clarendon Hills, Illinois, 60514	1966 Land-Rover 109 Diesel
John W. Keienburg	P.O. Box 1312 College Station, Texas, 77840	1968 Land-Rover 88 Series IIa 1956 Land-Rover 88 Series I
John Kirk	31-45 102 Street East Elmhurst, New York, 11369	1966 Land-Rover 109 Series II
Gary Landes	112 West Jeffery Street Baltimore, Maryland, 21225	1967 Land-Rover 88 Series IIa 1970 Land-Rover 109 Series IIa
Michael McMillan	1354 Boxwood Drive Melbourne, Florida, 32935	1971 Land-Rover 88, Series III
Walter Meissner	1163 Krameria Street #2 Denver, Colorado, 80220	1972 Land-Rover 88 Series III
Richard Michael Roberts	1643 Blue Hill Avenue Mattapan, Massachusetts, 02126	1970 3500S (2), 1969 2000TC
Charles J. Rowell	P.O. Box 3 Monett, Missouri, 65708	1970 Land-Rover 88 Series IIa
R.P. Saldamando	16518 Wilton Place Gardena, California, 90247	1970 Land-Rover 88 Series IIa 1968 2000TC
Donald A. Sick	23 County Road Westford, Massachusetts, 01886	1969 Land-Rover 88 Series IIa
Richard Siskind	P.O. Box 455 Baltimore, Maryland, 21203	
J. Clarence Stoekler	1720 New York Avenue Union City, New Jersey, 07087	1965 2000SC
Edward Sweet	23 Church Street Rutland, Vermont, 05701	1973 Land-Rover 88 Series III

RENEWAL MEMBERS (continued):

Randall Vogt	6955 State Street, Route 5 Salem, Oregon, 97301	1967 2000TC
Daniel A. Wasmund	R.R. 1, Box 85A Huxley, Iowa, 50124	1966 Land-Rover 109 Diesel
James A. Williams	P.O. Box 67 Van Wyck, South Carolina, 29744	1967 2000TC

NEW MEMBERS:

Hollis B. Austin	96 Prospect Street Holliston, Massachusetts, 01746	1970 Land-Rover 88 Series IIa
Ken Bateman	1047 Old Santa Fe Trail Santa Fe, New Mexico, 87501	1961 2000TC
Timothy E. Braithwaite	212 Bird Park Drive Pittsburgh, Pennsylvania, 15228	1972 Land-Rover 88 Series III
Paul D. Brooks	690 Alvarado #16 Davis, California, 95616	1959 105, 1953 75
William M. Chick	1809 Crosby Road Wayzata, Minnesota, 55391	1966 2000SC
Harold D. Connelly	9232 Darlington Road Philadelphia, Pennsylvania, 19115	1970 3500S
Alden L. Crittenden	6233 37th N.E. Seattle, Washington, 98115	1973 Land-Rover 88 Series III
Peter J. Cull	3334 Gulf of Mexico Drive Sarasota, Florida, 33577	Land-Rover 109
Robert Danko	Newberne West Virginia, 26409	1963 Land-Rover 88 Series II
Edwin C. Dukes	Box 102 Lefroy, Ontario, Canada, LOL1WD	1974 Land-Rover 88 Series III
Brian Dyer	P.O. Box 64 Bedford, Nova Scotia, Canada	1970 3500S, various 2000's various Land-Rovers
John P. Green	9614 Berryville Drive San Antonio, Texas, 78245	1967 Land-Rover 109 Series IIa 1967 Land-Rover 109 Series IIa
Alexander P. Grice IV	420 W. Bute Street Norfolk, Virginia, 23510	1972 Land-Rover 88 Series III
Dudley C. Grice	1443 Graydon Place Norfolk, Virginia, 23507	1965 Land-Rover 109 Series IIa
Charles & Stephanie Fuller	3302 Pemberton Avenue Richmond, Virginia, 23222	1964 Land-Rover 88 Diesel
Mark Halpern	3800 EL Centro Palo Alto, California, 94306	1967 2000TC 1967 Land-Rover 109 Series IIa
Reginald S. Johnson	30 Fifth Avenue New York, New York, 10011	1969 2000TC
Herman A. Karl	1917 N. Rodney Drive #214 Los Angeles, California, 90027	1969 Land-Rover 88 Series IIa
Dr. Thomas A. Keller	Quarters 84-A F.E. Warren AFB, Cheyenne, Wyoming, 82001	1974 Land-Rover 88 Series III
Charles Kellogg, Jr.	11 State Street Marblehead, Massachusetts, 01945	1961 Land-Rover 109 Wagon 1964 109 Ragtop, 1971 88
Bruce Steven Kessler	Academy for S.C.I., Box 370 Livingston Manor, New York, 12758	1972 Land-Rover 88 Series III
Rich Kingsley	R.R. 2, Lot 16, Brookwood Park St. Charles, Minnesota, 55972	1959 Land-Rover 88 Series II
William F. Kloc	5756 W. Hastings Arch Virginia Beach, Virginia, 23462	1972 Land-Rover 88 Series III

NEW MEMBERS (continued):

Dirk V. Lanning	P.O. Box 244 Portal, Arizona, 85632	1967 Land-Rover 88 Series IIa
Edwin J. Lemanski	P.O. Box 505 Bronx, New York, 10471	1967 2000TC
Tom Lowden	5613 Abington Court Newark, California, 94560	1957 Land-Rover 88 Series I
James M. McCaig	R.R. 1, Box 110 Manakin-Sabot, Virginia, 23103	1966 Land-Rover 88 Series IIa 1970 Land-Rover Utility Traile
Richard C. Matta	3479 Twin Oaks Drive Napa, California, 94558	1973 Land-Rover 88 Series III
Mark Maloziec	29659 Van Laan Warren, Michigan, 48092	1973 Land-Rover 88 Series III
J.F. Metzger	11620 Buena Vista Drive Los Altos Hills, California, 94022	
Gerard Moser	892 Los Robles Palo Alto, California, 94306	
Joseph Muscarella	Fredonia Stockton Road Fredonia, New York, 14063	1966 Land-Rover 88 Series IIa
Peter M. Neely	735 Illinois Street Lawrence, Kansas, 66044	1968 2000TC
Richard W. Officer	Box 6275 APO New York, 109633	1972 Land-Rover 88 Series III
Joseph Peterson, Jr.	721 Roselle Street Linden, New Jersey, 07036	1970 3500S
William E. Polcsa	15 Winona Way North Weymouth, Massachusetts, 02191	1968 2000TC
Rover Owners' Association of Richmond	Route 1, Box 209 Ashland, Virginia, 23005	
James B. Russell	6027 40th N.E. Seattle, Washington, 98115	1966 Land-Rover 88 Series IIa
Donna & Philip Saccio	36 Periwinkle Drive Bohemia, New York, 11716	1970 Land-Rover 88 Series IIa
Geroge R. Sawin	Route 1, Box 1194 Sequin, Washington, 98382	1967 2000TC
William K Smith	6137 West 65th Avenue Arvada, Colorado, 80003	1967 Land-Rover 88 Series IIa
Mark W. Stebbins	36 Kingsbury Road Garden City, New York, 11530	1967 Land-Rover 88 Series IIa
M.E. Sykes, Jr.	Route 1, Box 129A Wake Forest, North Carolina, 27587	1965 Land-Rover 109 Diesel 1961 Land-Rover 109 Wagon
Carl Untamo	858 Old York Road Somerville, New Jersey, 08876	1966 2000TC
Capt. Joseph R. Waldron	3d Light AA Missile Battalion MCAS Cherry Point, N.C. 28533	1973 Land-Rover 88 Series III
Ronald Watt	127 Pointe Claire Ave Pointe Claire, Quebec, Canada	1971 3500S, 1970 2000TC 1971 3500S
Laurence M. Weed	4249 13st Street North Arlington, Virginia, 22201	1973 Land-Rover 88, Series III
Stephen Wesson	1903 Herbert Avenue Salt Lake City, Utah, 84108	1969 Land-Rover 88 Series IIa
Richard W. Wilkinson, Jr.	Down the Lane Farm, P.O. Box 156 Poolesville, Maryland, 20837	1972 Land-Rover 109 Series III
Kendall L. Wilson, Jr.	1616 Grove Avenue, Apt. 1 Richmond, Virginia, 23220	1973 Land-Rover 88 Series III 1969 2000TC, 1966 Landy 109

ROVER IS ALIVE AND WELL IN TEXAS - The Story of Ron Jones and Parthenon Motors Limited:

In 1971, British Leyland made the decision to cease importation of the Rover 2000 and 3500 models to the North American market, consisting of the United States and Canada. The last of the cars entered the United States in approximately August of that year. The decision was primarily based upon service and emission problems with both the 2000 and the 3500. The basic inadequate quality of service the automobiles were subjected to resulted in the ultimate disatisfaction of a great percentage of people who owned them. People were aware of Rovers being finely engineered and sophisticated automobiles, but no one was ready for the problems that plagued the cars from the inception. Since most Rover owners intended the car to serve as a means of daily transportation they could not afford to own a car on which they could not depend.

Early in 1973, a young man in San Antonio, Texas was enjoying ownership of what were to be his first three Rover saloons. This man was Ron Jones. Ron was in a better position than most, in that he did all his own service work and obtained parts with reasonable efficiency.

At that time, there was only one dealer in the San Antonio area who was still servicing Rovers. And, having the option, chose to recommend his Rover customers to Ron rather than to continue dealing with them and be faced with delays in obtaining parts, in addition to numerous other complications.

By July of that year, Ron had acquired a decent inventory of parts needed to service his ten or twelve regular customers. Only two months later, it became obvious that there was a growing need for his services and that he had an expanding enterprise on his hands, founded on the now defunct, problem-laden Rover sedan.

It was clear that he needed to expand to a larger facility. One month later, in October, 1973, having obtained an adequate workshop and owning his hand tools and a small amount of shop equipment Ron's Automotive Sales and Service came into being, expressly for the purpose of servicing Rover cars locally and suppling parts to those who did their own service work.

Ron's enthusiasm for the vehicles mounted daily as he became ever more aware of the Rover Company's scientific safety considerations, fine aesthetic design, and exciting performance. He was becoming convinced that Rovers were not only a wonderful automotive experience, but a totally unique utilitarian concept. One of the most intriguing characteristics was the component panle design. This meant that any damage sustained to the bodywork could be conveniently repaired by replacement, leaving no evidence of having been damaged. Imagine, a bionic car marketed in 1963, the year the first Rover 2000 reached the marketplace! One suffered much less inconvience by simply replacing a panel, rather than having to deal with the usual long drawn out process of body work ordeal.

The concept of built-in longevity verses planned obsolescence intrigued the Texan. He then dedicated himself to keeping Rovers alive and on the road, rather than allowing their demise. That is how the trek began.

Rover owners, once disgusted to the point of almost abandoning their cars, now gratefully drive or ship their cars great distances for servicing. Word of mouth about the "Rover Man" in Texas has not only resulted in his supplying parts to customers in virtually all fifty states and Canada, but also personally servicing Rovers from a multitude of states.

His appreciation of fine English execution and attention to detail, so evident in the Rover, has led to an involvement with select other makes.

Since 1974, Ron has been servicing most of the Rolls-Royce and Bentleys in San Antonio. In the past two years he has learned to deal with virtually all aspects of these vehicles. So much so, that he has become involved in doing complete restoration work on Rolls-Royce and Bentleys with a degree of quality second to none. That very quality was responsible for a first prize being awarded a Rolls-Royce Silver Cloud III restored by Ron and shown in national Rolls-Royce Owners Club competition in Toronto, Canada in September, 1976.

In the Spring of 1976 Ron's Automotive Sales and Service became Parthenon Motors Limited. Three years have past since a workshop was needed for conveniently servicing Rovers in the San Antonio area. The three Rover 2000's that Ron then owned have snowballed into approximatley eighty Rover 2000's and 3500's, many of which are kept for parts and many for future reference. A formidable collection at any rate!

Until recently Ron limited his Rover involvement to the 200 and 3500 series saloons. But, the very exciting acquisition of his first two Range Rovers has commanded a great deal of his present attention. He considers this four-wheel drive vehicle to be a truly scientific approach to the go-anywhere, do-anything motor vehicle.

Once adapted to meet U.S. regulations, Ron's Range Rovers will serve as prototypes, and will enable him to begin importing and individually modifying them for compliance to sell on a regular basis. Early response to the vehicles indicate that demand is likely to exceed supply.

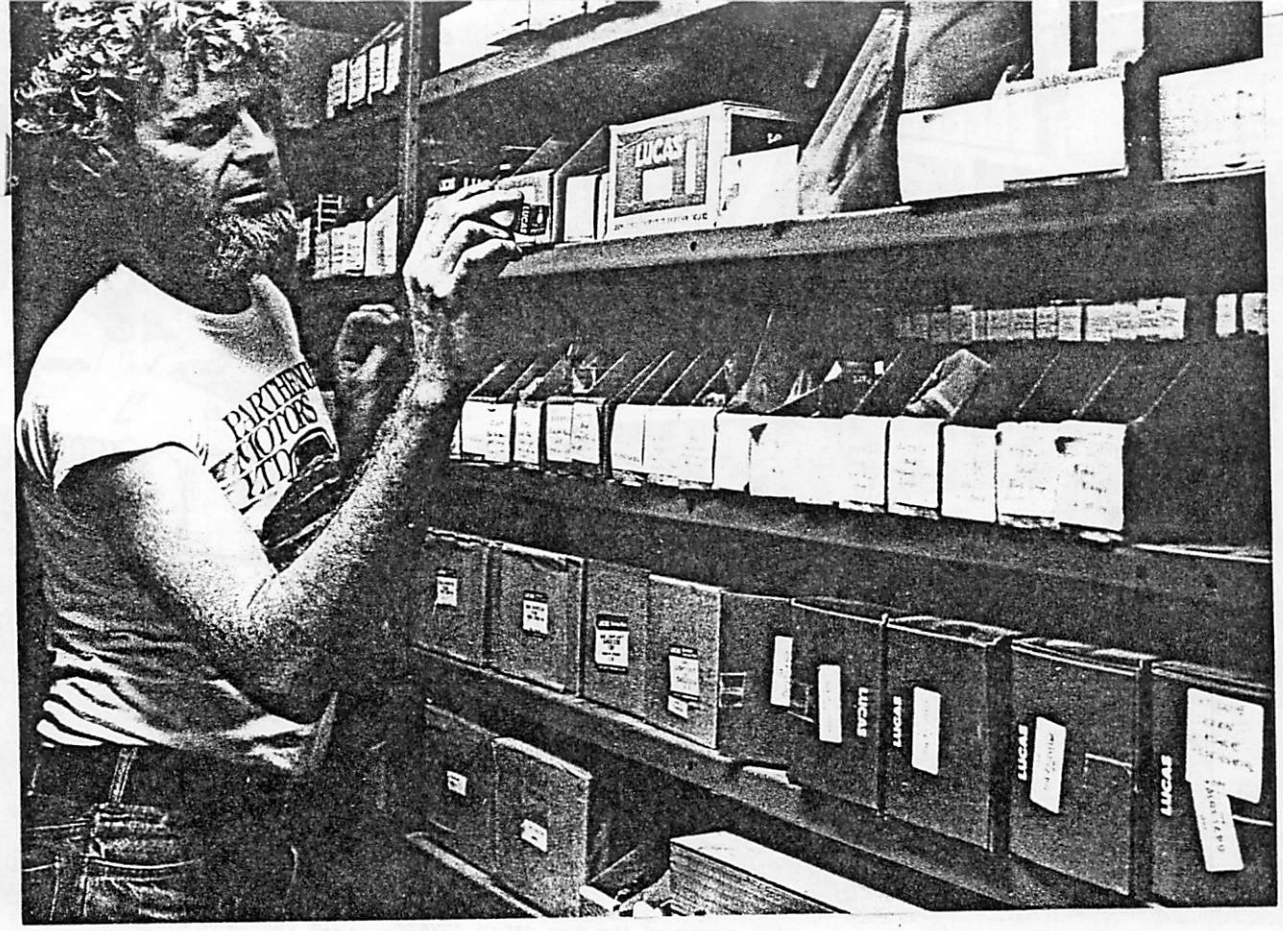
But, Rover sedans are still Ron's first love. And his commitment to them is fully realised in every completely restored car that leaves his shop. These better-than-new, rejuvenated 2000's and 3500's are Ron's greatest source of happiness and pride. For these are totally no-compromise restorations making the Rover all it can and needs to be. Each car is finished with the quality of paintwork heretofore reserved for Rolls-Royce. Each layer of paint is painstakingly hand rubbed. And anyone who is familiar with Rovers will find it difficult to believe one can experinece trouble-free Rover ownership. Ron is so familiar with virtually every aspect of the car that he is often able to anticipate trouble sposts and deal with them before they become a problem for the onwer, so as to provide as trouble-free a situation as any car of such sophistication and complexity can.

His desire for owners to appreciate their Solihull products has prompted him to give the buyer a two year, mo mileage limit warranty on all mechanical workings. This includes the responsibility of all maintenance, including tune-ups, lubrications services, and so on.

Ron not only welcomes, but encourages calls from Rover owners at virtually any time, day or night, to talk about their cars and to assist them in any capacity he can in order to help them in any capacity he can so that they may experience the fun of Rover ownership to the fullest extent. His demand for perfection necessitates his giving his full attention to every aspect of the business, which sometimes takes him away from the shop for hours at a time. But, his twenty-four hour a day answering service enables him to return all calls as promptly as possible.

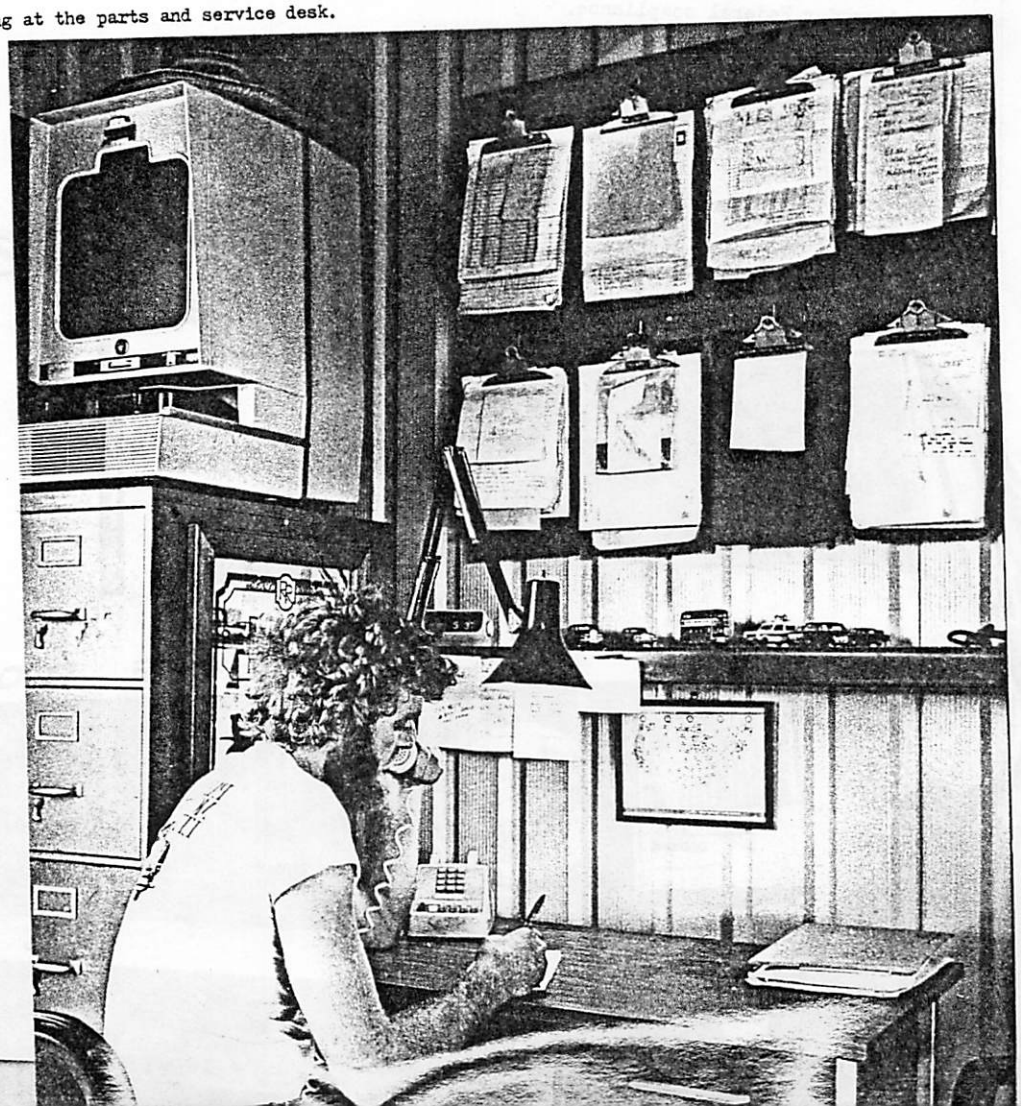
This brings us up-to-date with Ron's Rover venture. He considers it to have just begun, since he intends a major expansion of his facilities to accommodate the growing demand for Rover parts and service, in addition to Rolls-Royce and Bentley restoration commitments. Those who think that the Rover will die out in this countyr should rest assured that Ron Jones will never allow that to happen.

As unbelievable as Ron's story may appear to many readers it is true. Your editor has known Ron for a number of years and his enthusiasm for Rovers has, if anything, increased. Ron gave us great pleasure in allowing us to drive one of his Range Rovers. Up until this point we had only read glowing reports on this vehicle. We can confidently say that they are all true and then some. The Range Rover provides a ride which is perhaps smoother than the Rover sedans while at the same time outdoing the Land-Rover in anything off road. You can run it at forty or fifty miles per hour through New York City's worst streets and it will take potholes a foot deep as though they didn't exist. Words cannot adequately describe what one ride will. Also, Ron's warranties are very complete. One of his customers for a restored 2000TC telephoned Ron from San Francisco with a bad valve. Ron diagnosed the trouble on the phone, prepared another cylinder head, and was off via plane to San Francisco where the cylinder head was replaced, the car road-tested, and the owner sent off to his satisfaction - no additional charge since this is covered in the warranty. Ron's warranty means quite literally that you won't have to spend another dime on the car while under warranty!



Above:
Parts Department depicting Rover and Lucas items. A portion of the new parts inventory that now exceeds $75,000 in value.

Below:
Ron sitting at the parts and service desk.

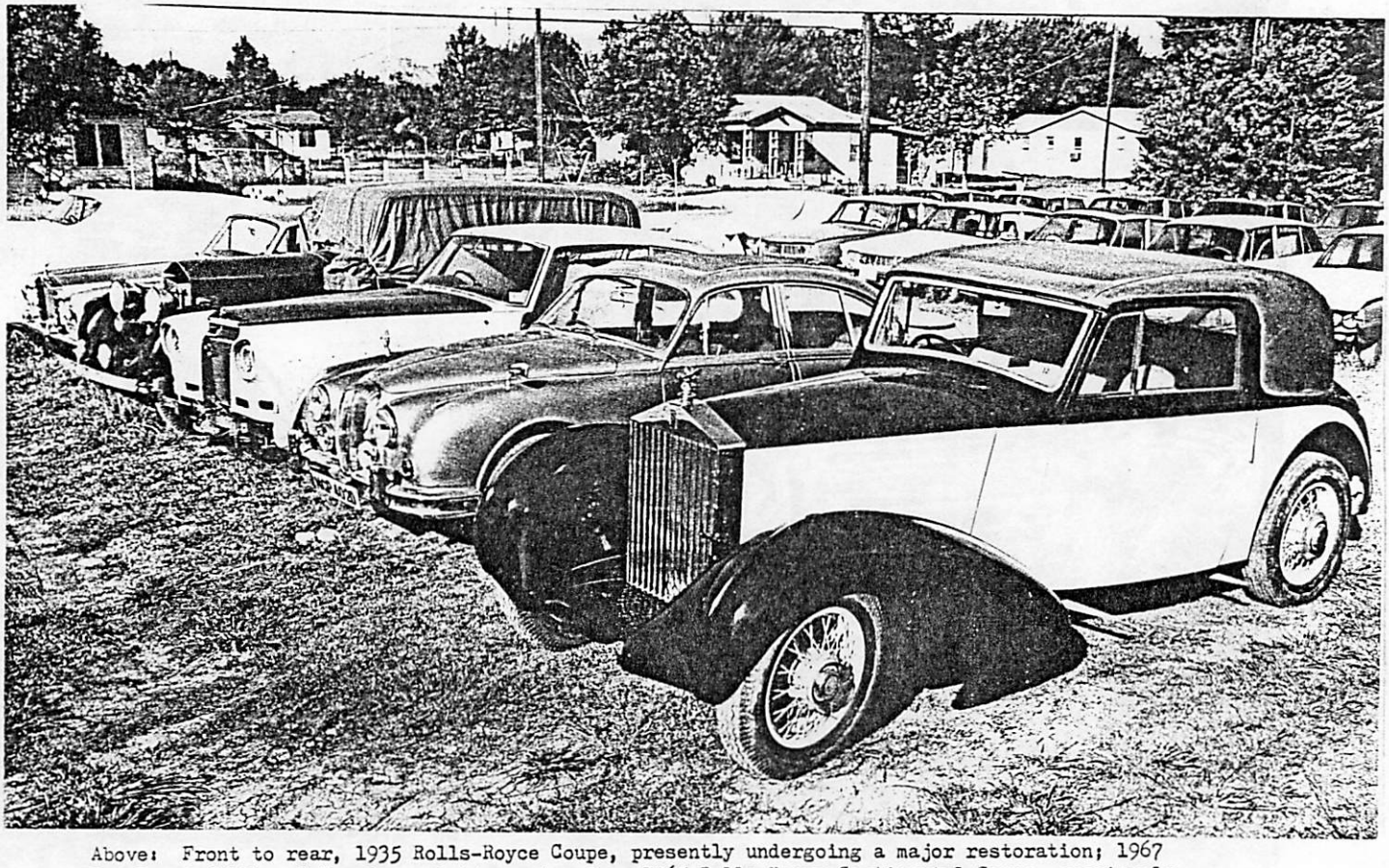


Above: Ron performing a tune-up on the newer of the two Range Rovers. This one is a left-hand drive 1973 model originally sold in Sweden.

Below: A 1972 right-hand drive British model Range Rover which is presently undergoing modifications for Federal compliance.

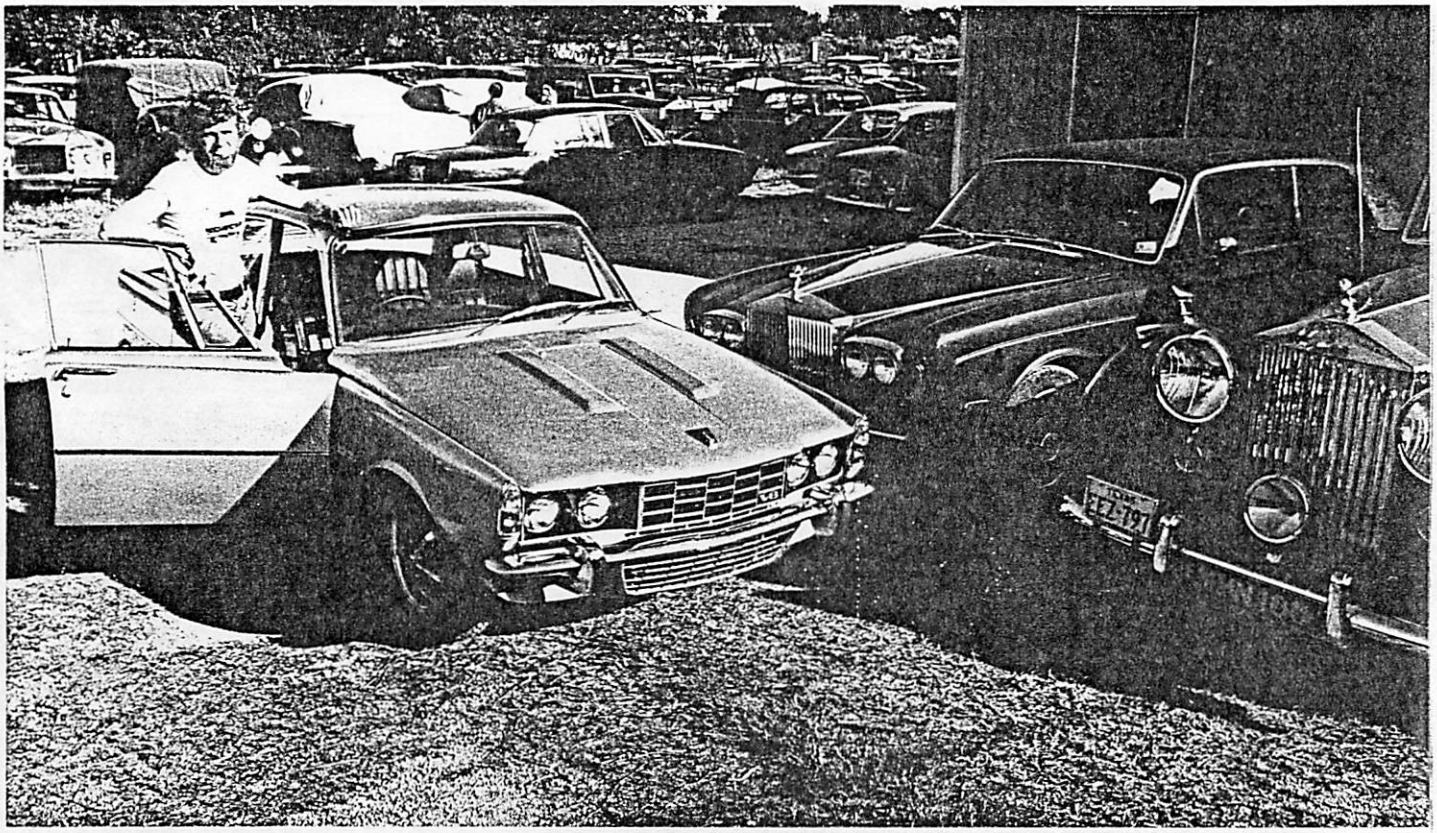
Above: A 1972 right-hand drive Rover 3500. This is Ron's personal car and has been fitted with British police-car spoilers, chrome Rostyle wheels and Michelin XWX tires.

Below: A portion of the 80 or so Rovers Ron has collected since 1973.

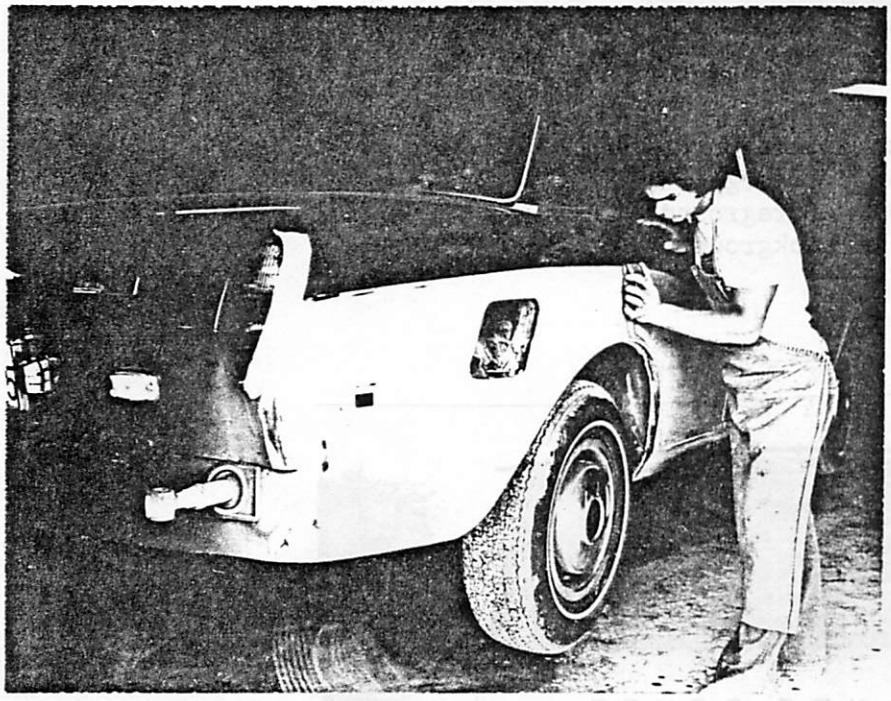


Above: Front to rear, 1935 Rolls-Royce Coupe, presently undergoing a major restoration; 1967 Daimler 2.5 litre V-8 saloon, being restored; a 1965 Rolls-Royce Continental Coupe, previously owned by the singer, tom Jones, and undergoing major restoration; a 1937 Rolls-Royce Limosine, to be restored; a 1969 Rolls-Royce Silver Shadow, for sale.

Below: Ron with his 3500 in front of a 1974 Rolls-Royce Corniche Coupe and a 1955 Rolls-Royce Silver Wraith Limosine.

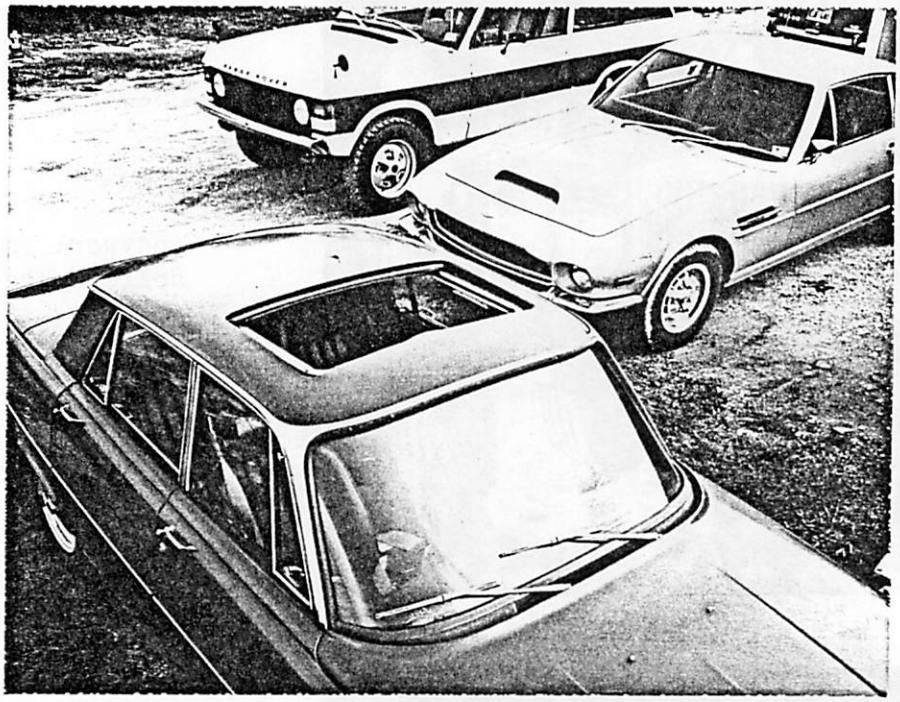


Bodywork being performed on a Rolls-Royce Corniche Coupe.



Bodywork being performed by George Loredo on a 1974 Rolls-Royce Corniche.

Rear view of a 1972 3500 showing British registration number. R-type Bentley in view.



Electric sunroof installation on Rover 2000TC, installed in body shop by George Laredo. 1976 Aston-Martin DBS in foreground; Ron's personal Range Rover in background.

The proper license plate for someone as involved in Rovers as Ron is.

THE ENGINEERING STORY IN DEPTH

Following the well established and distinctive pattern of Rover 'new model philosophy', the new 3500 makes a strong visual and conceptual break with its predecessors. Yet paradoxically, it is still solidly in the Rover engineering tradition. It was designed and developed by a talented engineering team under Spencer King, Director of Engineering for Leyland Cars. All of its design features are there for a good reason—there is no slavish following of fashion, but neither are there any deliberate attempts to be different merely for the sake of any misguided individualism.

It is a 'thinking-engineer's' car with a high degree of detail, sophistication and refinement which belies its deliberately simple 'paper' specification. A disciplined approach to weight and cost control has produced a car of excellent all-round performance and (in tune with the times), economy, offering unusually good value in terms of trim and equipment for the price.

Computer-aided design

Advanced computer techniques, now used on all new Leyland cars, were used to optimise all the complex design parameters such as body shell rigidities and suspension rates; and drawing on many years' experience in producing one of Europe's safest cars, the Rover engineering team has managed to achieve a very high level of security without producing a ponderous and ugly 'mobile fortress'. Reliability and ease of servicing have been given high priority, recognising that even luxury car buyers may have tight budgets to maintain.

New factory for a new car

The new Rover 3500 is built in an all-new plant, which has been designed to meet the exacting requirements of the NATO-recognised 05–21 Ministry of Defence quality standard, using the latest and best car production technologies. In short, it is another classic Rover—and most importantly, a classic Rover of even wider appeal in styling, performance and versatility than any of its distinguished forebears.

Exotic but long-lasting style

The styling of the new Rover will be a major talking point for people seeing it in the metal for the first time.

Leyland Cars Director of Styling, David Bache, created much of the concept and style of the car. He says: "We quite deliberately aimed for an exotic but long-lasting style. Early clay bucks of the design were put alongside cars like Maseratis and Ferraris, and despite the fact that it was a fully practical hatchback saloon car and not a cramped Grand Tourer it looked perfectly in keeping."

Rover cognoscenti will spot the hallmarks of David Bache's styling team in many of the detail features of the exterior and interior design. There is the same feeling for the 'sculptural' form of the car as in the celebrated 2000-series, (and this aspect is accentuated by the no-cost option metallic paints) the same tasteful understatement, but with a new sparkle and dash which sets it as far apart in 1976 from the 2000 shape as that in its turn was from the much-loved P4 model in 1963.

Slippery shape for stability, economy

Turning to the basic philosophy of the design, David Bache says: "We deliberately went for good aerodynamics in the body shaping—for stability, economy and high cruising speed. I had wanted to make the 2000 more 'slippery' than it eventually turned out, but we had to concede to the conservative demand of a previous decade for an identifiable radiator grille. With the new 3500, we got our own way, with a fully aerodynamic nose and cooling intake, fully integrated visually with the bumpers which could be modified later on to meet 5 mph impact regulations (say for America) without ruining the appearance.

"The air intake panelling under the bumper is in injection-moulded plastics, for corrosion resistance in a vulnerable area, and also for ease of producing the complex wind-tunnel-proved shape. It is in effect an anti-lift air dam, with a reverse aerofoil to contribute to low drag and stability and also to direct cooling air through

Leyland Cars

ROVER 3500

the radiator. Following the aerodynamic theme, we have got the centre of pressure well back for good straight line running at the high speeds which the car does so effortlessly."

High class hatchback

The conception of the new Rover was set in 1971, only two years after the Austin Maxi, Britain's first hatchback saloon, had been launched. It seemed a bold step to put a fifth door into a car which would obviously need to appeal to a conservative sector of the market, unused to such novelties. David Bache obviously feels gratified by the strong swing to hatchbacks in certain classes.

"I never had any qualms about doing this. We had a nice clean fastback shape, which besides being necessary to provide a balanced look on this long wheelbase, lent itself admirably to an equally elegant 5th door treatment which would not raise any of the traditional objections to 'utilities' or estate cars. I don't really see it as a utility—we make several good cars to cope with that sort of use—but more as a quality car in which you could bring home a couple of Chippendale chairs, that sort of thing, without any problems.

"We haven't compromised the luxury of the car in any way to achieve this. It's a unique combination of the exotic and the practical which should meet the needs of a lot of people."

Quality with cost-effectiveness

Spencer King, well known as the innovative engineer behind many Rover designs from the successful gas turbine cars to the versatile Range Rover says: "Some people may well compare the new Rover with the old P6 series (the Rover 2000 series) and say that it is not so 'technical' in its specification. This is absolutely true, and it is quite deliberate. With the P6 in an age when people set great store by impressive specification, engineers enjoyed themselves using quite complex solutions to achieve the design requirements. On this one we had to use much more subtlety and more intensive development to get equally impressive results from a 'simpler' design which would offer easier servicing, better reliability and generally better cost-effectiveness.

"On all aspects of our design work, we had to remember the need to get the quality and safety we wanted without excessive weight or cost which would affect performance, economy and value. It wasn't an easy job, but we are pleased with the result."

BODY DESCRIPTION

Beneath the Style

The sleek lines of the new 3500's bodyshell encompass a wealth of typically Rover refinements.

A monocoque shell was chosen for its maximum efficiency in metal usage—excess weight costs money and wastes petrol. Right from the early stages of body design, consultations were held with the Motor Insurance Research Repair Association at Thatcham to ensure that accident repair was as easy and inexpensive as modern technology can make it. A further help in this respect is the new thermoplastic paint used for the new Rover which, apart from its superior finish, is easier to match in repair work.

The all-steel monocoque shell has the now near-universal crushable-end, rigid passenger cell structure for impact and/or roll-over safety. All four doors have high anti-burst load locks and will open and shut after the ECE12 30 mph frontal impact test. A novel safety feature shown on some of Leyland's safety research vehicles in 1974 has been incorporated in the new Rover—horizontal compression struts inside each door, just below the glass line. These feed longitudinal impact forces through the body via 'proximity pads' at the ends of the struts—thus helping to maintain the integrity of the passenger cell. Tamper-proof childproof locks are fitted on rear doors.

Placed well out of harm's way, the fuel tank is mounted ahead of the rear axle, beneath the floor, while the bonnet is front-hinged for safety.

World first for windscreens

Setting an entirely new standard in windscreen safety, the Rover is the world's first production vehicle to fit the revolutionary new Triplex Ten-Twenty laminated windscreen, with its remarkable 99% reduction in facial injury potential. This important safety innovation is mentioned under the heading of 'Body' as it is virtually part of the shell. It is bonded to the screen aperture by means of the 'Solbit' vulcanising process (as used on TR7), thus providing excellent screen-retention and also contributing significantly greater strength to the body and roof structure.

Comprehensive anti-corrosion measures

Really first-class corrosion resistance is an important factor in long term safety, as well as conferring benefits of low depreciation. On the new Rover, Leyland's pioneering experience with electrophoretic primer has been put to good use, and a new technique of forced ventilation in the body sills will further improve longevity. All the time that the car is moving, air is fed from the heater air intake chamber into the sill box members, and flows out at the rear, preventing the build-up of corrosive damp inside the structure.

Further anti-corrosion measures include careful underbody design to avoid mud-packing features, full underseal protection and the use of zinc-coated steel for the sill outer panels.

Stainless steel bumpers are specified and as already mentioned, the front apron is in impactable rust-free plastics. The exhaust system is aluminised in all potential corrosion areas for long life.

Safety for pedestrians and other road users

Body safety in the new 3500 is not confined to the pampered occupants. Pedestrians too, are considered, with sensibly smooth contours all round, 'kind' bumper profiles, and flush fitting door handles.

Other drivers will also be aware of the new Rover's safety thinking. The large rear lamps incorporate high intensity fog guard lamps, as well as reversing lamps, and the stylish crenellations of the lamp lenses reduce obscuration from road dirt, as light shines through the inclined faces. Mud flaps are fitted as standard, front and rear, to avoid dirtying other people's lamps and to minimise stone damage.

For safety at night the front doors are fitted with automatic red warning lights on their trailing shut faces, and powerful halogen headlamps of unique integrated design are fitted together with apron-mounted auxiliary lamps. Acknowledging that all this safety lamp design is little help if the basic bulbs fail, Rover engineers have fitted a warning light to indicate failure of any side, tail or stop lamp—a feature new amongst British cars. Hazard warning lamps are a standard fitting.

'Automatic' parcel shelf

Amongst many other notable features of the bodywork are a locking fuel filler flap, and gas spring struts for easy opening of the tail door. Connected to the tail door by means of a detachable strap, is a novel form of parcel shelf which folds along a transverse hinge as the tail door is opened to give access to the boot space, but provides normal privacy of boot contents when lowered.

The parcel shelf can be removed to maximise luggage volume with the rear seat in either of its two positions. Because the shelf is so large, and had to be able to support reasonable loads even in hot sunshine, and yet be light enough for easy handling, a new type of g.r.p. foam-reservoir moulded laminate was used. Jacking points are mounted near the corners of the body for convenience and safety of wheel changing in awkward or hazardous conditions.

All in all, the body designers have well earned the right to put the crisp modernised version of the respected Rover 'Viking ship' symbol on the prow of this important new car.

The inside story—quality and safety

High quality interior design and finish has always been a strong suit for Rover. Inside the new Rover 3500, the modern aficionado will

Leyland Cars

ROVER 3500

revel in the superbly clean and integrated design theme.

The safety message comes through just as strongly here too. Developing the facia theme which proved so popular on the 2000-series cars, the new 3500 has a stylish dished facia-top shelf, with a self-contained instrument binnacle in front of the driver; drop-down locker bins offer the familiar enormous and convenient storage, together with excellent impact cushioning for legs and knees. Both lockers are illuminated—and there is a neat map reading light for the passenger.

The facia itself has a well-proven safety structure, with vacuum-formed grained ABS skin on foam padding over a carefully stressed energy-absorbing pressed steel armature. The steering wheel has a large padded hub and adjusts over 50 mm (2 in.) ranges both axially and vertically. The twin column control stalks, covering all safety-critical functions, adjust with the wheel to maintain 'fingertip' control. The steering column incorporates both a collapsible section and universal joints for maximum driver protection.

Continuing the Rover tradition for carefully thought-out seat belt installations, the new 3500 has clever seat-mounted lower anchorages to maintain the correct and safe belt positioning for front seat occupants using any position along the 200 mm (7·9 in.) of seat adjustment. The inertia reels and the vertical runs of the webbing are all stylishly concealed behind the door pillar trims. There is a reminder/warning lamp for front belts.

Contour seating

Comfort for all occupants is assured by the sumptuous box-pleated nylon velour trim over carefully contoured seating. The front seats have head restraints as standard, and the seat squab can recline to a near-horizontal position. At the rear, there is a centre folding armrest.

The rear squab folds flat after releasing the single central catch, creating a sophisticated load carrier. Twin inertia reel rear seat belts are offered as an option (a third static belt can be fitted by the dealer.)

Luxurious deep-cut pile carpet covers the floor, and the boot area is carpeted too, with two removable boards over the capacious spare wheel well-cum-'hidden stowage' chest. It is possible to stow the spare wheel vertically on either side if preferred. 'High level' luxury and safety is also shown in the roof lining—the brushed nylon trim is mounted directly onto a moulded glass fibre former which gives good sound deadening, heat insulation and a useful degree of impact cushioning in a space-saving manner.

Padded sun visors, trimmed in matching material and with a safety vanity mirror on the passenger side, and mounted on safety pivots, are neatly housed within moulded recesses in the headlining, while the dipping rear view mirror has a safety pop-out mounting.

Sensibly sized ashtrays are fitted on each door, and there are twin courtesy interior lights operated by all four doors. There are also automatic boot and underbonnet lamps.

Secure electric locking

New to Rover is an electric central locking system. This locks or unlocks all five doors simultaneously from the front door keys, or from a switch on the driver's door for security against malevolents. The system allows all normal locking/unlocking to be carried out, and also permits 'override' locking of the boot and facia lockers for security in public garages etc. A safety feature of this type of locking system is that all doors are automatically unlocked by the driver when entering the car, which avoids the potentially dangerous situation of occupants being trapped in the car following an accident.

A full centre console and tunnel console is fitted, which stylishly integrates the standard-fit push-button radio, the illuminated heater controls, small change tray, gearshift, choke lever, optional electric window controls and handbrake mounting. Twin radio speakers are provided, one in the passenger door for bass, and the treble (speech) speaker in the

instrument binnacle. Additional rear speaker mountings are provided for stereo equipment.

Corporate air-blending heater

Already well proven in the Princess and TR7 ranges, the fresh air heating and ventilation unit fitted to the Rover is a Leyland corporate design of outstanding efficiency and versatility. It has a three speed blower fan of unusually large size to obtain generous volume flows of air at low speeds, thus reducing noise. A recirculation mode is provided to aid warm-up and to exclude unpleasant fumes, and ventilation air is ducted to driver and passenger vents in addition to central facia vents which direct air to rear passengers.

Side window demisting is achieved by means of air ducted through the door and up to the glass. Vents in the sides of the transmission tunnel direct hot air to the rear footwells. Stale air is expelled via extractor vents at the rear which are positioned to encourage demisting of the rear glass areas. A heated rear window is fitted (as on all Leyland Cars saloons) and it has the largest heated area ever supplied by Triplex. Tinted glass is fitted all round. Power operated windows are an optional extra. All 3500's will be fitted with an internally adjustable, door mounted driver's mirror, while the matching passenger door mirror is an option.

MECHANICALS

Engine—power with parsimony

It is common knowledge that the basic design for Rover's outstanding lightweight aluminium 3½ litre V-8 engine was bought from General Motors. Few people realise just how many fundamental design changes were made at the outset to suit Rover's production and quality requirements. Now, after many years' experience with this superb power unit, Rover's engine designers have still further developed it for the new 3500. It now has more power, a wider rev-range, electronic ignition, improved oil and and water pumps, a 1975 Design-Award-winning inlet Air Temperature Control valve, a viscous coupling fan, and a plug-in diagnostic facility for accurate servicing.

The changes in detail

Some of the extra power comes from extending the upper rev-limit of the engine. The original GM engine had a peak rev limit of 4750 rpm, which was raised to 5200 rpm by Rover's original changes. For the new car, this has been raised to 6000 rpm, by altering the valving in the hydraulic tappets, fitting slightly larger inlet (+1·8 mm/0·07 in. on dia) and exhaust (+1 mm/0·04 in. on dia) valves, with new single valve springs, and by making improvements to the cylinder head porting and manifolding. The exhaust manifolds in particular have been improved, with dual outlets for each bank, phased as follows:

Left hand	1+5, 3+7
Right hand	2+4, 6+8

the extractor effect thus provided improves the top end torque.

Electronic Ignition offers considerable benefits, particularly for an eight cylinder engine. The previous single contact breaker system would not have been able to cope with the revised engine 6000 rpm peak, and a twin contact breaker system was rejected on grounds of potential service problems. Rover engine designers chose a Lucas system, using a proximity switch make and break, and with the amplifier built into the distributor.

This gives better overall performance and economy—the higher voltage permits wider sparking plug gaps and virtual immunity from cold fouling even when the enormous flexibility of the engine is being used to the full in low speed, top gear work. With this system, Champion N12Y (extended core) sparking plugs are used, as they were found to offer a very wide heat range. Proof of this came when it was found that for the first time, the normal road plug could be used for full power bench test work. Of course, the major advantage of electronic ignition is its freedom from servicing needs.

A test engine fitted to the old 3500 model was subjected to 24,000 miles of alternating city, high speed test track and open road use without even needing its sparking plugs changing.

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Improved oil pump

An improved skew gear drive has been adopted for the oil pump of the revised engine, and the oil pump shaft is more rigidly supported to avoid binding. An Oldham coupling is used to accommodate any eccentricity which arises in the oil pump drive, while improved sump baffling is used to cope with the high accelerations which the new car can generate. Oil pump capacity is higher to avoid marginal lubrication conditions at idle speed and to provide an extra oil supply to the skew gear. While the front engine cover was being modified to accommodate the above oil pump changes, the opportunity was taken to change the front crankshaft seal from the previous rope type to a new lip-seal, hence reducing air leakage into the positive crankcase ventilation system.

Diagnostic system

Using a magnetic transducer by the front crankshaft damper to sense crankshaft position, the new Rover's diagnostic system provides rapid checking of timing, dwell angle, low tension circuit output and high tension pulse quality.

Thermostatic control of air intake

The new Rover is the latest Leyland Cars design to adopt the 1975 Design-Award-winning Air Temperature Control valve design, in a new larger form to suit the V8 engine. It feeds both carburettor air cleaners, and mixes hot air from an exhaust manifold shroud with cool air from the front of the car to give a substantially constant air intake temperature. This aids rapid warm-up and improves driveability on the lean mixture needed to meet pollution regulations—hence contributing to the excellent fuel economy of the car.

Other changes

Because of the increased engine speed available, the piston rings have been reduced in width to lower their inertia, hence avoiding potential blow-by problems at high revs; likewise, the water pump impellor and involute have been re-designed to reduce power loss at higher speeds.

TRANSMISSION

Gearbox—automatic

The standard fit automatic gearbox for the new 3500 is the Borg Warner 65 3-speed unit, which is an improved version of the earlier model 35, offering smoother shift quality and a generally more robust specification. An 11 in. diameter torque converter is fitted. Gear selection is by means of a centre-console mounted lever with a comfortable and stylish safety design grip.

Gearbox—manual

Yet more fresh ground is broken for Rover with the provision of an optional five speed manual gearbox, having a very high geared-up fifth ratio (28·8 mph/1000 rpm) which combines with the high torque engine and wind-cheating shape to give effortless 'seven league boot' cruising with economy.

Another 'corporate' design, the gearbox (designated by the spacing of its shaft centres, '77 mm'), will be used on other Leyland vehicles. It uses a single rail selector mechanism, baulk ring synchromesh on all 5 gears and a remote control shift mechanism placed ideally for driver comfort, mounted on rubber at four points for isolation from drive-train vibrations. The lever is spring loaded to the 3/4 plane. Cast iron is used for the actual gearbox for strength and freedom from temperature differential expansion problems, while to minimise unnecessary weight, aluminium is used for the bell housing and the gearbox rear extension.

Taper roller bearings are used to contain end thrusts in the gearbox, and needle roller bearings are used for all gears on the mainshaft except the overhung 5th gear. As on the previous 3500S model, gearbox lubrication is assisted by means of a small integral oil pump

which feeds oil under pressure to mainshaft bleed holes, including a feed to the mainshaft spigot bearing.

Propshaft

The comparatively short propshaft length permits the use of a single shaft, and plunging constant velocity joints are used at each end for smooth running at all angles and freedom from axially-transmitted vibration.

Final drive

A hypoid final drive is used, in a cast iron housing. The steel axle tubes are pressed into the differential housing and staked, while the long nosepiece/torque tube bolted to the front flange of the housing is in aluminium. The extension drive-shaft is of tubular steel construction, located by a ball-bearing race in the propshaft end of the extension.

SUSPENSION

Self levelling simplicity—and subtlety

Students of suspension design will be interested in the approach used in the new Rover. Solihull engineers have always shown a remarkably open mind on suspension design, and their success in combining high standards of both ride and handling while using a disarmingly simple layout, is the result of unusually painstaking detail design and development.

Experience with Macpherson strut front suspension on the Triumph 2000 series was drawn on for the similar layout on the front of the new Rover 3500. An offset coil spring location is used to balance the binding effect of of the stub axle moment, thus giving a 'stiction'-free suspension movement, while ball-bearing top swivel mountings give similarly smooth steering rotation. The ends of the finely-tuned anti-roll bar serve additional duty as wheel location tie rods. The inner pivots of the lateral track control arms are mounted on the engine mounting cross member, which is bolted solidly to the body shell at four widely spaced points.

Anti-dive, anti-squat, rear suspension

At the rear, a form of torque-tube live axle suspension is used, with trailing links and a rea mounted Watts linkage. Long travel (23 cm/9 in.) constant rate coil springs are mounted directly onto the axle tubes, and telescopic dampers, incorporating automatic self-levelling, are mounted forward of the axle, at the ends of the axle tubes, to give optimum damping control in bounce and roll.

Unlike some complex self-levelling systems which require energy-wasting engine driven pumps, these ingenious levelling damper units make use of the very spring energy which they have to dissipate to maintain the nominal rear ride height, regardless of vehicle loading, up to maximum payload. Self levelling rear suspension permits the use of soft constant rate springs for excellent riding qualities, without the normal penalties in attitude change and variable handling.

The geometry of the torque tube axle design provides anti-dive and anti-squat properties under braking and acceleration respectively, contributing greatly to very relaxed and reassuring chassis behaviour even under the hardest driving.

STEERING

Rack and pinion for the first time

Rack and pinion steering is used here for the first time on a Solihull Rover. It is a new design of Burman power-assisted rack, made using electro-chemical machining techniques for the highest accuracy. The rack is mounted on the front of the suspension cross member, and uses torsion bar sensing for progressive steering feel. Sensibly high gearing takes advantage of the power-assistance, needing only 2·7 turns of the steering wheel for an amazingly compact 10·4 metre (34·3 ft.) turning circle. The resultant effortlessly quick steering combines with the well behaved chassis design to make for an easy to drive and nimble luxury car which compares extremely well with cars of double the price and/or complexity.

BRAKES

Powerful stopping

Power-assisted, dual line hydraulic brakes are used on this new high performance Rover. A direct acting vacuum servo provides beautifully

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balanced assistance to the 258 mm (10·15 in.) diameter front disc brakes and self adjusting 229 mm (9 in.) diameter rear drums via separate circuits.

A rear circuit pressure limiting valve is fitted to minimise rear wheel locking, but this is automatically isolated in the event of a front circuit failure, to maximise remaining braking effort. Failure in either circuit is shown by a dashboard warning light connected to a pressure differential warning actuator switch. The brake warning light also indicates low fluid level and handbrake 'on' conditions. The handbrake is centrally mounted and works on the rear drum brakes for maximum parking efficiency.

Wheels and tyres

Pressed steel, 14 in. diameter disc wheels, with 6 in. width, safety ledge rims, five stud fixing and positive spigot centre location are used on the new 3500. Accurate wheel location plays a major part in providing the smooth ride of this car. The standard size tyres with these wheels are 185/HR 14 steel braced radials. For customers wanting the ultimate in handling and style, special cast alloy wheels with low profile 195/70 tyres are an available option. Following the lead set by the previous 3500 model, Dunlop Denovo tyres are also available, incorporating the latest tyre design improvements.

OTHER SYSTEMS

Controls and instruments

Ergonomic excellence is the keynote of the new 3500's controls. Column stalks in the usual acclaimed and consistent Leyland pattern control horn, indicators and headlamp flash/dip (right hand stalk), with windscreen wash/wipe, two speed and intermittent wipe controls on the left hand stalk. Just beneath the right hand stalk is a neat toggle switch for the side and headlamps.

Mounted ahead of the driver, on the sweeping facia shelf is a beautifully neat instrument and switch binnacle, carrying four small instruments for fuel level, battery voltage, oil pressure and coolant temperature. In the centre thereare large speedometer and tachometer dials, and at the driver's right hand fingertips there is a compact group of smoothly-operating push on/push release button switches for front and rear fog lamps, heated rear window, hazard warning lamps, and where fitted, the master power window switch. A rheostat control for instrument lighting is provided on the right hand side of the binnacle.

Warning lamps for all reasons

A block of warning lights is situated on the left hand end of the binnacle covering all normal functions together with seat belt warning, side/tail/stop bulb failure, heated rear screen and rear fog guard lamps 'on'. These warning lamps have a subtle 'smoked glass' facia effect whereby their symbols do not show until illuminated—there can be no doubt that the lights are on or off even in bright sunlight. Immediately in front of the driver is a warning light for handbrake on/low fluid level/brake circuit failure; ingeniously, while the 'normal' warning lights are carefully screened to avoid windscreen reflection, the 'danger' lamps are deliberately allowed to reflect for maximum awareness. Ideally placed within the binnacle is the driver's face level air vent, directing air to the driver's face and not on to his hands. A similarly located vent is provided for the passenger just above the locker bin, while the central vents can be directed either to the front or rear occupants. Illuminated heater controls are vertically mounted on the centre console, beneath the radio housing and within easy reach of both driver and passenger.

Fuel system

Long distance drivers will appreciate the 65·9 litre (14·5 gallons) fuel tank, giving a possible range of over 350 miles. The tank is safely tucked beneath the floor ahead of the rear axle. A submerged-type electric fuel pump is used for maximum reliability and there is an automatic cut out for the pump in the event of the engine stopping—an important safety feature to cut down fire risk. The fuel filler flap is lockable with the boot/glove locker key.

Further information: Product Affairs, Public Relations, Longbridge.
Tel: 021-475 2101

GENERAL DIMENSIONS

Wheelbase	9 ft. 2½ in.	281·5 cm
Track: front	4 ft. 11 in.	150·0 cm
rear	4 ft. 11 in.	150·0 cm
Ground clearance (5 up condition)	6·1 in.	15·5 cm
Turning circle (between kerbs)	34 ft. 3 in. dia.	10·4 m dia.
Overall length	15 ft. 5 in.	470·0 cm
width	5 ft. 9 in.	177·0 cm
height (unladen)	4 ft. 5½ in.	134·0 cm

Weights

All-up kerb weight	2985 lbs.	1352 kg
Gross vehicle	4230 lbs.	1915 kg

Capacities

Petrol tank	14·5 galls.	65·9 litres
Engine sump and oil filters	9·5 pints	5·5 litres
Engine sump—drain and refill	8·25 pints	4·75 litres
Gearbox (manual)	2·80 pints	1·60 litres
Rear axle	1·60 pints	0·90 litres
Cooling system and heater	19·50 pints	11·00 litres

BRIEF SPECIFICATION FOR UK & EUROPE

Engine

No. of Cylinders	8 in Vee formation	
Bore	3·5 in.	88·9 mm
Stroke	2·8 in.	71·1 mm
Capacity	215 cu. in.	3528 cc
Compression ratio	9·35 : 1	
Max. Power DIN	155 bhp at 5,250 rpm	
Max. Torque DIN	198 lb. ft. at 2,500 rpm	
Carburettors	Twin SU HIF6	

Transmission

Manual

Clutch: 9½ in. (241 mm) Single dry plate diaphragm spring with hydraulic operation.

Gearbox: Five speed all synchromesh plus reverse

Gear ratios	1	2	3
Internal	3·321 : 1	2·087 : 1	1·396 : 1
	4	5	REV
	1·000 : 1	0·833 : 1	3·428 : 1

Automatic

Gearbox: Borg-Warner type 65 3-speed with 11 in. torque converter.

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BRIEF SPECIFICATION FOR UK & EUROPE

Transmission

Final Drive: Live 'torque tube' type axle with hypoid differential.

Ratio	3·08 : 1	
MPH/1000 rpm top gear	Manual	28·8 mph
	Automatic	23·5 mph

Suspension

Front—Independent Macpherson strut with lower link. Fore and aft location by anti-roll bar.

Rear—Torque tube type live axle with coil springs and combined telescopic damper/ride levelling units. Fore and aft location by trailing arms and transverse location by Watt's linkage.

Wheels and tyres

14 in. dia spigot located steel with 6 in. safety ledge rims.
185/70 HR 14 in. steel-braced radial ply tyres.

Steering

Power-assisted rack and pinion mounted on front cross member. The steering column incorporates a collapsible safety system and is adjustable both axially and vertically. There are 2·7 turns from lock to lock with a 34·25 ft turning circle.

Brakes

Direct-acting servo assisted split system with separate actuation of front discs and self-adjusting rear drums. The system incorporates a pressure limiting valve to reduce the likelihood of locking the rear brakes. In the event of failure of one circuit, a pressure differential switch actuates a dashboard warning light.

Battery

12 volt 68 amp hour at 20 hour rate. Located under bonnet.

Alternator

55 amp output.

Fuel System

14·5 gallon (65·9 litres) tank situated between the rear wheels with submerged electric fuel pump.

Body

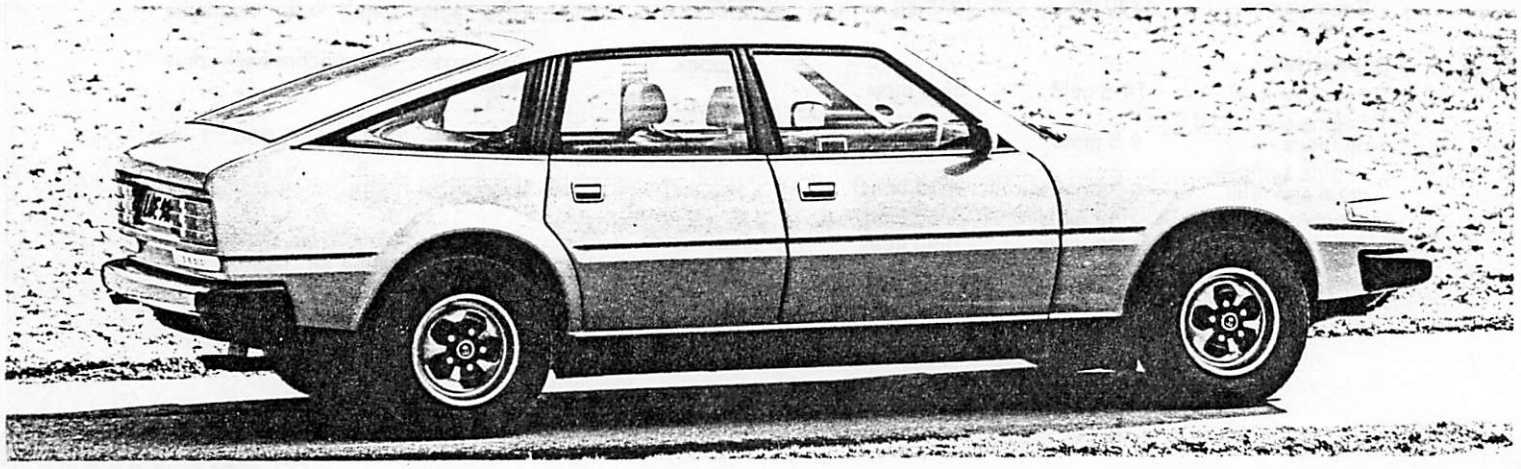
Type—Integral monocoque construction with front (bolt-on) cross member. 5 seats, 5 door.

Upholstery—Short pile nylon, box pleated velour seats. Deep pile carpeting throughout.

Instruments—Comprehensive instrumentation with speedometer, tachometer, fuel, temperature, oil pressure and battery condition gauges. Warning lights for, low oil pressure, low fuel level, hand brake on, low fluid level, brake line failure, side/tail/brake light bulb failure, heated rear window, indicators, mainbeam headlights, choke, rear fog guard lamps and seat belts not fastened.

Seat Belts—Inertia reel seat belts for both front seats with lower anchorage points on seat frames and concealed reel and belt to shoulder level.

Further information: Product Affairs, Public Relations, Longbridge.
Tel. 021-475 2101.



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THE NEW ROVER 3500, A STYLISH AND LAVISHLY-EQUIPPED FIVE-DOOR SALOON, LAUNCHED BY LEYLAND CARS ON TO THE EXECUTIVE SECTOR OF THE MARKET.

Not to be published until 30 June 1976

NEGATIVE NUMBER 265190

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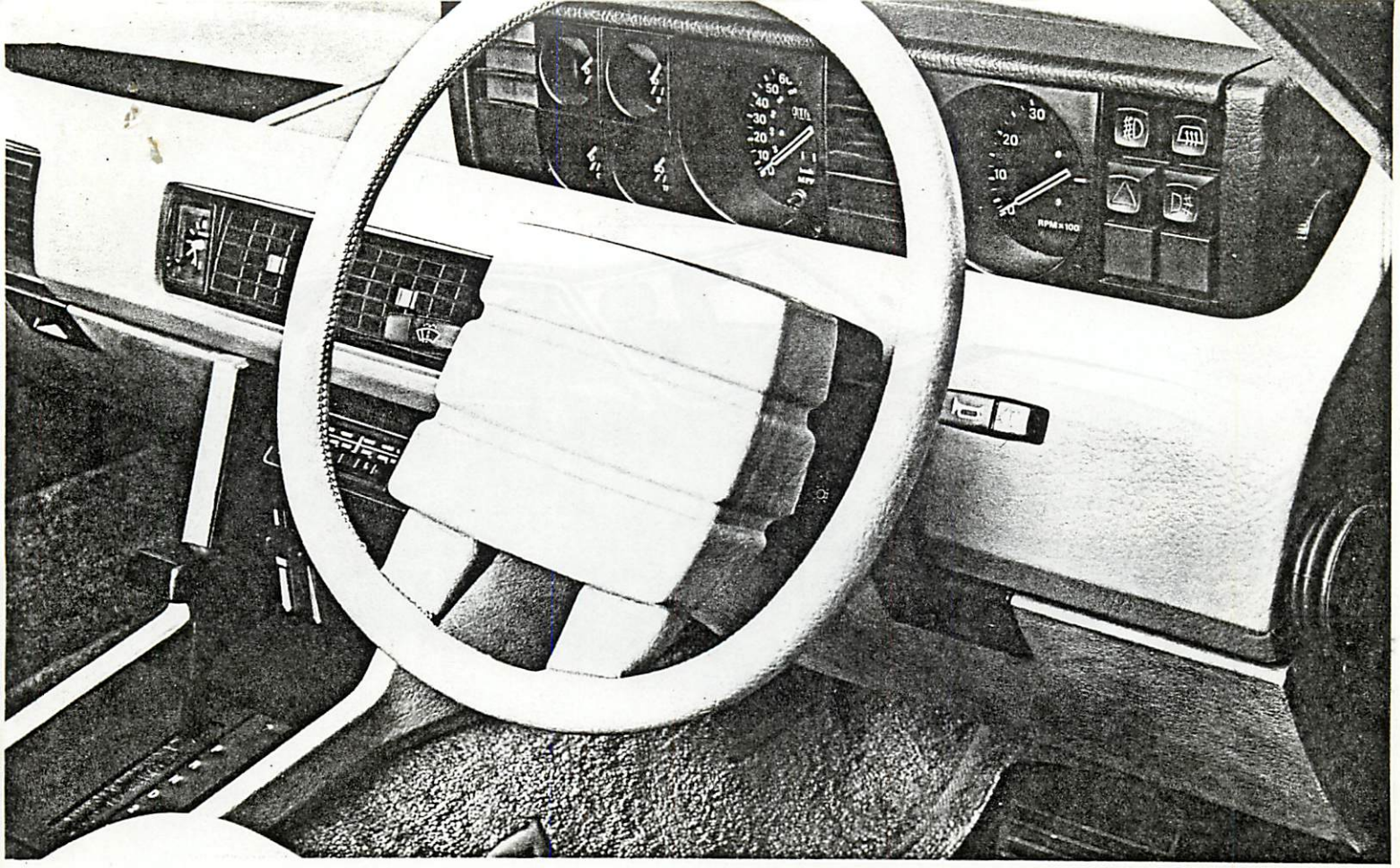
NEGATIVE NUMBER 265188



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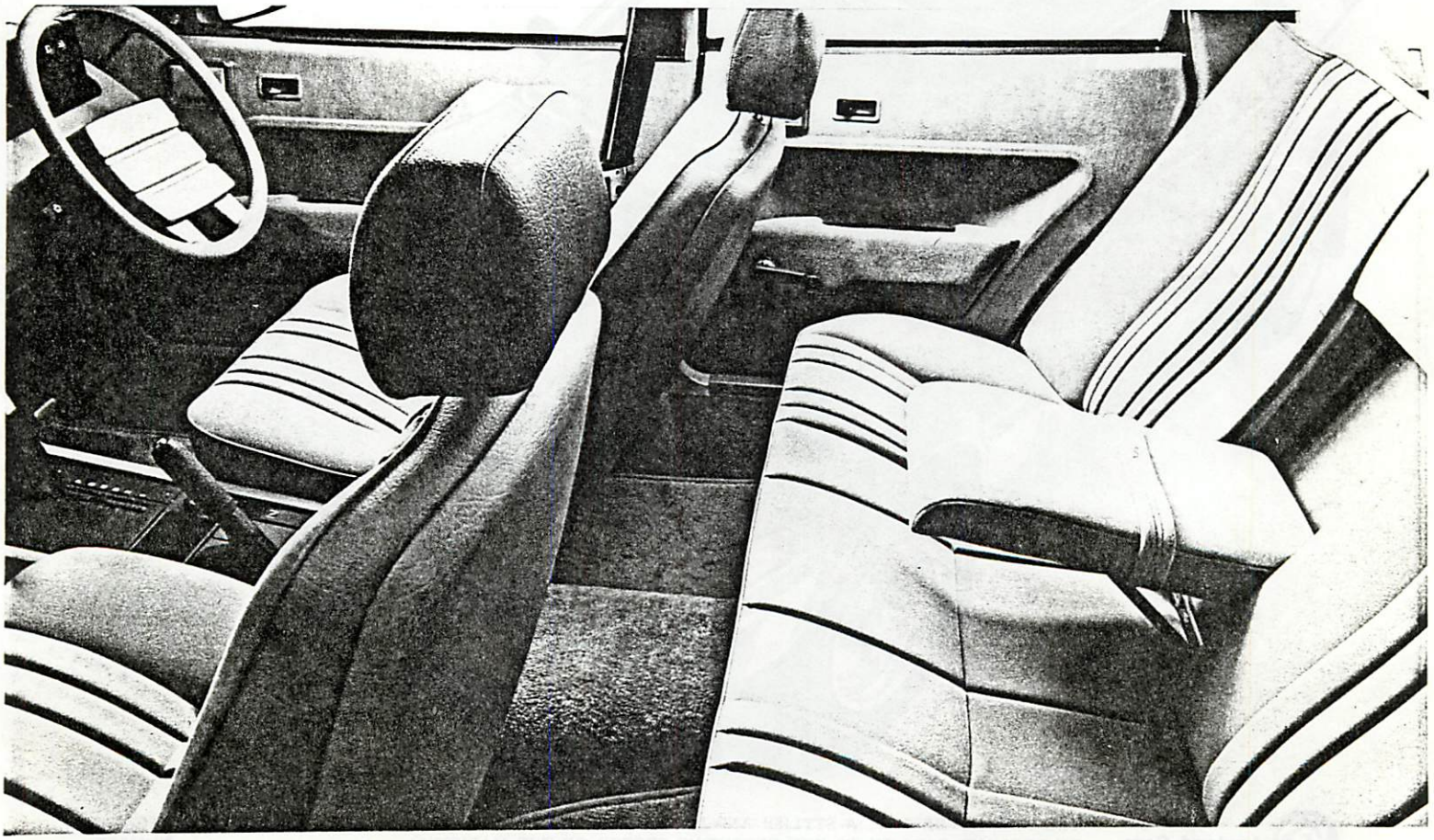
NEGATIVE NUMBER 265231



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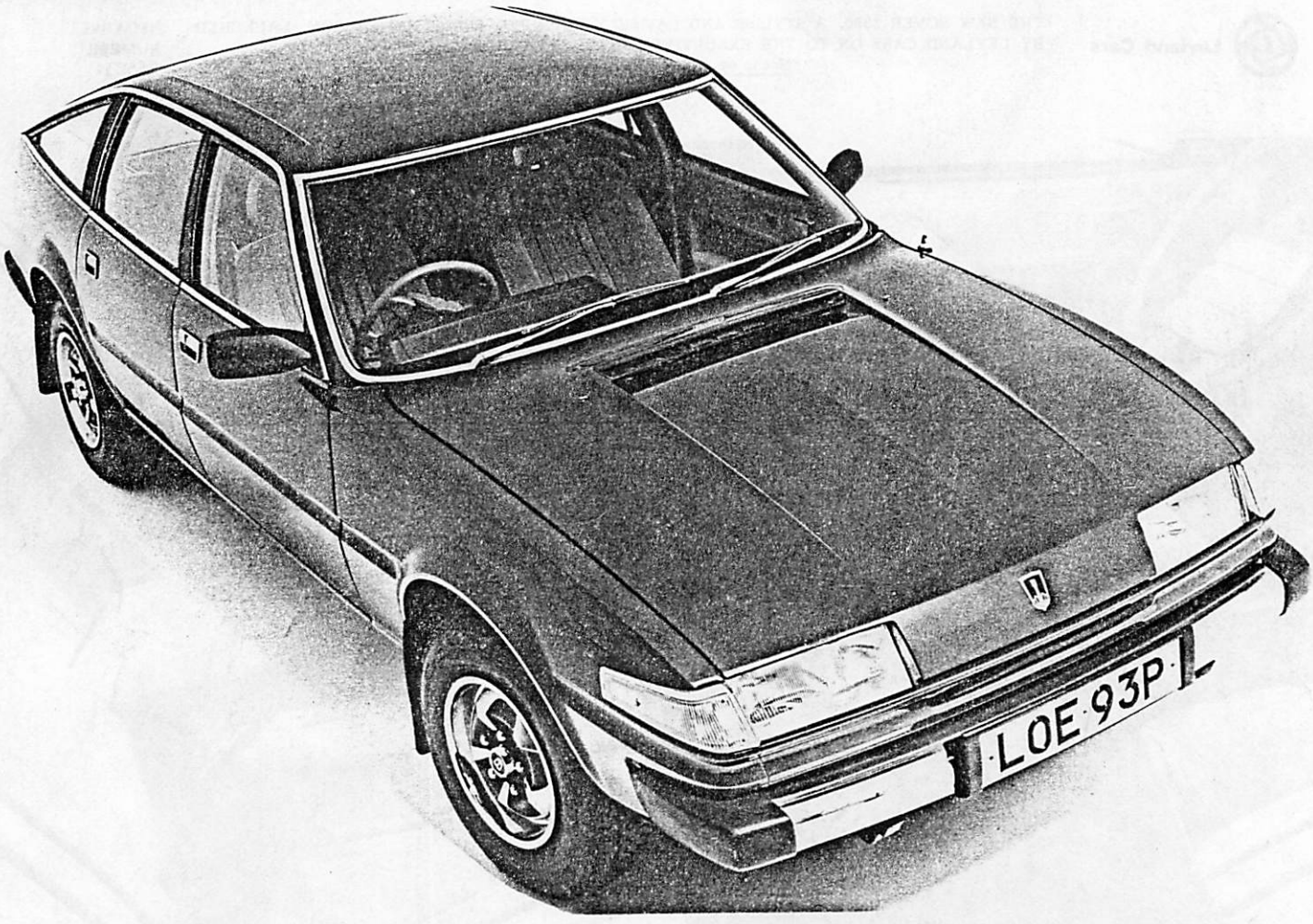

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Not to be published until 30 June 1976

NEGATIVE NUMBER 265250