

ROVER OWNERS' ASSOCIATION

OF NORTH AMERICA



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Land-Rover Owners Respond: In response to the letter in last month's newsletter we have received a number of letters from Association members. The following is an excerpt from a letter to us by Norman F. Lewis, Jr. of Golden, Colorado:

Bebe Platzner's Land-Rover problems don't seem to be usual. I've known of people having problems with new Land-Rovers, but much of this is due to improper handling by dealers and shippers. Land-Rovers have to be broken-in - they can't just be driven right away in any "normal" manner. Careful break-in can generally mean long life for most major components. Dealers and/or shippers often don't care how they treat new vehicles. I've seen them driven flat out with no more than twenty miles on the odometer! My 1965 "88" has 112,000 miles on it, with not much more than normal maintenance, including transmission overhaul, valve jobs, clutch replacement, hydraulics overhaul and other such maintenance. My 1957 "88", which was obtained this past summer, was in poor condition when bought, but careful and methodical restoration is bringing this Land-Rover around to being a very good second car. In spite of much abuse mechanically it was fairly sound, except for needing a valve job, brake shoes, and new rear axle seals and bearings. Land-Rovers are not "perfect" nor are they the answer to everyone's 4WD needs, but I personally wouldn't own anything else, except possibly a Range Rover!

On the other hand, we received the following letter from Dick Siskind of Baltimore, Maryland:

I just received the latest newsletter and I was amazed at the similarity in the plight of myself and Bebe Platzner of Texas and the problems we both share with our Land-Rovers.

In the past 10 months I have had to have all of the gaskets and seals in the transmission/transfer box replaced, the windshield washer replaced once (the new one doesn't work either!), the paint is chipping off, and the seals in the slave cylinder for the clutch disintegrated while I was in heavy traffic leaving me without a way to shift gears. One of the chronic problems is the car's propensity to leave puddles of oil wherever I park.

At first, the dealer seemed unable to come to grips with the problems. They seemed to make the situation worse rather than better. All of that changed, however, when I responded to a letter from British Leyland Headquarters in New Jersey asking me if the warranty work for the 1000 mile checkup had been performed to my satisfaction. You can imagine the bitterness of my first response. As a matter of fact they sent me a reply almost immediately and they said they would talk to my dealer about the situation. To my surprise, the dealer called me up at work and with an air of urgent politeness asked me to bring the car in at my convenience. Since that time the man in the service department has really put himself out for me. He fixed the leaky windshield; he repaired the poorly fitting terminal to the fuel flow solenoid; he has repaired the clutch; and tomorrow, when I take the car in for its 12,000 mile check-up, he will repair the handbrake and the windshield washer. However, this is a little hypothetical. I bought the car for the same reasons that Bebe did. I gave up my Volvo for it in fact. And I must say that I am somewhat disappointed that it can't withstand the rigors of Baltimore. At the moment, the car is running quite smoothly. However, I was considering trading it in and going back to a Volvo or an Audi. I think that if there are any more problems with my Rover I might just get rid of it and save myself the aggravation.

Again, I register my disappointment in the so-called "world's strongest vehicle" and I hope that I never have to cross a jungle or desert in it without having a repairman with me.

Land-Rover Wins Rally Despite Broken Rear Axle: Member Dexter Bradbury recently authored the following report in the January 31, 1975 issue of Stop Watcher Magazine.

The Virginia Tech Sports Car Association kicked off the '75 season this past weekend with a rally and an autocross. While I could not make the autocross, the rally was one of the Tech Club's best efforts in several years. Rallymaster Ken Sprigings' gimmick event was flawless, and Marion Graves was working everywhere keeping things going smoothly. But I must save most of my praise for my own vehicle - how many of you could finish an event with a broken axle?

Ken's concept of every instruction placing you on route by number was excellent - and tricky. More than once the numbered route turned off a straight pavement onto a pair of ruts. The roads were fun, and the gimmick questions required thought as well as observation.

As Tony Linkous and I pulled into the second checkpoint everything was lovely. Then as Tony released the clutch of my Land-Rover it happened - a broken rear axle. The other rally vehicles coming into the checkpoint offered their sympathies, which proved premature. We locked the front hubs, placed it in four wheel drive, and let the front wheels pull us the rest of the way through. We not only finished, but actually won, in what the Tech Club soon christened the "world's largest Mini-Cooper". The factory's advertising is correct - it is the "World's Most Versatile Vehicle".

Results: 1. Tony Linkous/Dexter Bradbury (Land-Rover 88) 650; 2. Marshall Overstreet/Marie Kerwin (BMW 2002) 902; 3. John Adams/Suzie Gaghan (Vega) 909.

Cracked Land-Rover Exhaust Manifolds: Member James J. Leons offers the following advice to Landy owners who have experienced exhaust manifold problems. He went through three manifolds in four years and 98,000 miles of driving. The last time that he had one break he bought a new one in Boulder, Colorado for \$60.00 and the dealer gave him a gasket with the manifold. The gasket provides expansion with the side of the block; before it was just a metal to metal fit. He has now driven 30,000 miles and has had no trouble, but has had to adjust the securing bolts.

Compression Ratio Increase for Land-Rover 2½: Member Norman F. Lewis, Jr. offers the following data regarding compression ratio increases on the 2½ litre engine.

Compression ratio of the 2½ litre petrol engine can be increased by milling the cylinder head, which can result in some power increase - particularly if combined with other modifications. For timing purposes it is useful to know the resulting compression ratio. It must be emphasized that these figures are approximations, based on measurements of a 1965 7:1 CR head (suffix F engine), but should be accurate enough for most purposes.

| <u>Mill from 7:1 CR head</u> | <u>New CR</u> |
|------------------------------|---------------|
| 0.010", 0.254mm | 7.1:1 |
| 0.020", 0.508mm | 7.2:1 |
| 0.040", 1.016mm | 7.4:1 |
| 0.050", 1.270mm | 7.6:1 |
| 0.060", 1.524mm | 7.7:1 |
| 0.080", 2.032mm | 7.9:1 |
| 0.084", 2.134mm | 8.0:1 |
| 0.100", 2.540mm | 8.2:1 |

Before a head is milled, it should be examined very carefully for cracks. While a crack will not necessarily render a head useless, milling is not advisable. By the way, there is plenty of metal to mill before the water jacket is encountered. I know of one instance of 1/8" (0.125", 3.175mm) being removed from a 7:1 CR head, resulting in an 8.6:1 CR. No cooling problems were ever noticed, even in Africa.

More Land-Rover Interchange Information: The following interchange information is provided courtesy of member Norman Lewis.

Ignition Parts for Land-Rover (American Auto Parts, "Powercady")

| Year & Model | Points | Condenser | Cap | Rotor | Coil | Generator Brush | Starter Brush |
|---|--------|-----------|--------|--------|----------------------|-----------------|---------------|
| '54 - '55 2 litre SerI | 31-403 | 32-404 | 33-402 | 34-400 | 35-3 (epoxy) | 310-400 | 311-401 |
| '56 - '58 2 litre SerI | 31-407 | 32-407 | 33-402 | 34-400 | 35-3R _{oil} | 310-400 | 311-401 |
| '58 - '69 2½ litre petr Ser II, IIa | 31-407 | 32-407 | 33-408 | 34-400 | 35-3R | 310-400 | 311-401 |
| '67 - present 2.6 litre pet Ser. IIa, III | 31-407 | 32-407 | ----- | 34-412 | 35-3R | 310-400 | 311-401 |
| '70 - present 2½ litre petr Ser IIa, III | 31-407 | 32-407 | ----- | 34-400 | 35-3R | 310-400* | 311-401 |

* Not for Ser. III with alternator

NAPA Ignition Components (add to list in Vol. IV, Number 1)

| Series I, Year | Points | Condenser | Cap | Rotor | Generator Brush |
|----------------|---------------------|-----------|--------|-------|-----------------|
| '48 - '53 | CS 201 | EP 22 | EP 39* | EP 41 | 401 |
| '54 - '55 | CS 204 | EP 25 | EP 39 | EP 41 | 401 |
| '56 - '58 | CS 207A assembly | EP 29 | EP 39 | EP 41 | 401 |

* Can be used, but doesn't match original cap.

Additionally, Norman Lewis provided some photos he took on a recent tour of the factory as well as the following comments.

Concerning the matter of the oldest Land-Rover and highest mileage in the U.S. I can contribute the following data. The oldest Land-Rovers I know about in the U.S. (though probably not the oldest) are:

- 1) Series I "80", chassis 16131323, a 1951 model in a wrecking yard at Moab, Utah
- 2) Series I "80", chassis 16131929, a 1951 model in the Denver-Boulder, Colorado area
- 3) Series I "80", chassis 16136879, a 1951 model seen in Denver, Colorado

All are LHD basics (no hard tops or soft tops). People have told me of older models (1949) on the West Coast, Southern California, and Mexico, but this hasn't been verified. Possible some members out that way will know. (Member Bob Bernard in Redwood City, Cal. has a Series I "80", chassis 06107360, 1950 model). As for the highest mileage, in the May, 1969 issue of Four Wheeler magazine a W.E. Dill, Jr. of Phoenixville, Pa. wrote stating that he had a 1952 Land-Rover with "over 300,000 miles" on it. He also claimed to have a 1965 Landy with 170,000 miles. That was over five years ago so the mileage on both now could be much greater.

Members may be interested in the following data. On the Land-Rover 2½ litre and 2.6 litre engines there is an American made oil seal available for the timing cover. It is Chicago Rawhide (C?R) seal #19220, which is a double lip seal instead of the single lip seal as is normally used on the timing cover. This double lip seal appears to seal

Norman Lewis' Comments Cont'd:

better, especially if the crankshaft pulley has become grooved by the timing cover oil seal. The cost should be \$1.00 to \$1.50, depending upon where you buy it. Also, a suitable thermostat for the Series IIa/III 2½ litre petrol engine is Thomson #170 (high temp) or #70 (low temp). To use these thermostats one must also use Thomson spacer-seal #4663 in the thermostat housing (may have to remove any old traces of the old "O" ring).

I am presently overhauling the engine of my 1965 Land-Rover and I would like to know how the wear on it compares to that on other Landys that have been overhauled. With 125,000 miles on it, the cylinder bores were worn 0.013" (this is a 4 cyl, 2½ litre petrol unit). Main and connecting rod bearings were worn quite a bit, but the crankshaft itself was very good - no visible scoring or grooving, although it is being ground .010U.S. to correct any possible ovality. I would be interested to know to what degree other Land-Rover engines were worn. This was the first time that this engine had been torn down; it had never had a ring or bearing job done on it - just valve jobs. It was still running quite well, except for oil consumption and a possible bearing knock.

Difficulties with a Land-Rover Dealer: Two letters follow, both of which were written to British Leyland regarding improper dealer service and preparation. Member Charles Klein of Bethlehem, Pennsylvania is the writer and will keep us informed regarding his on-going battle. The first letter is dated 12/30/74:

On October 23, 1974 I purchased a new Land-Rover Model 88 from Mr. David J. Moses at JH Bennett, Inc. in Allentown, Pennsylvania. To begin, I was charged more for the vehicle than had been displayed on the window price list. At delivery, after I removed the price list from the windshield myself and drove home I had a thorough look at the new Rover. I realised that it had been delivered with the crankcase nearly one quart overfilled, the four-wheel drive was engaged, and the tire pressures were 36, 38, 46, 49, and 52 p.s.i (25psi is correct). Not even these most superficial points had been inspected and I was forced to correct them myself or be immobile until I could have a service appointment. There was obviously no pre-delivery inspection for which I paid \$85.00. Absolutely no effort to remedy any of this was offered, only that there was always someone else in the dealership to whom I should talk for any relief. After four visits it was apparent that I would never meet anyone with decision-making power.

On December 27, 1974 I had the JH Bennett Service Department accomplish the 1500 mile inspection. Besides being charged \$4.00 for lubrication for the Rover, the malfunctioning rear door lock (which was pointed out to Mr. Moses prior to delivery but was not corrected) was not inspected or repaired, the atmospheric bleed pipe from the air cleaner elbow to the carburettor (also broken at delivery time) was still not repaired, neither the gearbox, transfer box, front or rear differential units were drained and refilled, and quite obviously (because of the undisturbed dirt on my Rover) items such as engine mountings, suspension fixings, swivel pin housings, tire pressures, and road wheel fastenings were not checked. All of these items are part of the "free" inspection. I don't know how much of the vehicle price paid is allocated to this inspection, which was only partly done, and can be added to the \$85.00 for services paid for but not received.

Since I intend to drive my Land-Rover for many years and much of this maintenance, so far undone, is critical to avoid potential problems, I am writing to you for direction in obtaining proper service from an interested dealership or financial reimbursement from this sale to allow me to buy the essential service from another source. If, by copy of this letter, Mr. JH Bennett offers me either alternative I will notify you immediately.

Land-Rover Overdrive: Member Floyd Coleman forwarded to us a recent edition of the Motoring World magazine published by Autoweek. It had the following test of the new overdrive unit for the Land-Rover:

British Leyland's Land-Rover—a utilitarian workhorse of 26 years' standing—has moved further into recreational fields now that a unique overdrive unit is offered and occupant comfort has been improved. The Land-Rover is the same versatile four-wheel-drive vehicle, but the new Fairey overdrive unit has effectively given the field-car 16 forward gears, four reverse gears and better open road cruising.

I've just spent a week thrashing about in one of the 1975 model regular wheelbase Land-Rovers, and find the new overdrive makes the vehicle more comfortable to drive and should boost appeal to off-roaders. The overdrive was engineered specially for the Land-Rover by Fairey Winches, and can be engaged at any speed in any gear while driving forward or reversing. Any Land-Rover with a standard gearbox (left or right hand drive) can accept the overdrive which comes as a kit and is fitted in about three hours. If you're handy with a few tools, all you need to do is cut the transmission tunnel for the overdrive gear lever, remove the vehicle's drive gear, and install the overdrive adaptor gear and the overdrive unit itself. There are no electrical or hydraulic connections. Apparently the most difficult part of the whole operation is cutting the hole in the transmission tunnel! Once prospective Land-Rover buyers have driven one with the overdrive unit, they'll insist on this option which has really transformed the vehicle's cruising comfort. With the standard gearing on the regular 88 inch wheelbase model, the Land-Rover's 2.3 liter, 70bhp four-cylinder engine is spinning at 1000rpm for every 15mph in top gear, but the Fairey overdrive raises the gearing to a more comfortable 19.2mph. If you engage the low ratio gearing for tough cross-country work, the regular gearing is 7.2mph or 9.2mph with the overdrive engaged. The longer 109-inch wheelbase model has a slightly higher gearing of 16.5mph per 1000rpm in top gear which goes up to 21.1mph with overdrive engaged, while the low ratio drive is 8.0mph and 10.2mph in overdrive per 1000rpm. The overdrive is engaged by simply depressing the clutch and as a large notice on the dashboard orders the driver to do this, I didn't find out what happens if you try to switch in the overdrive without using the clutch. For normal road work there is no need to use anything other than the overdrive ratio. The robust overhead valve engine develops a whacking 120 lb. ft. torque at a lowly 1500rpm, so flexibility is no problem, and the test vehicle had ample performance using overdrive ratio for all the gears. Road speed with the overdrive in use is increased by 27.8 per cent at the same engine speed which naturally improves fuel consumption, reduces engine and gearbox wear and gives the Land-Rover much longer legs than before. While Land-Rover has never been up front in the four-wheel-drive power race, the four-cylinder model does have a top speed of between 65 and 70mph unladen and will accelerate from a standstill to 50mph in 16.3 seconds. Unlike the thirstier Toyota, Datsun and Willys utility field-cars, the four-cylinder Land-Rover is good for between 18 and 20 miles to the gallon. Land-Rover offers the 86bhp six-cylinder 2.6 liter and 62bhp 2.3 liter four-cylinder diesel as options, but while

the six has greater towing and carrying potential, the four-cylinder petrol engine has remained the mainstay of Land-Rover production. The sight of four gear levers in the cockpit may be alarming to the rookie Land-Rover driver, but he soon sorts out the big one which stirs the gears, and the three smaller levers that control the overdrive, low ratio and 4-wheel-drive mechanisms. As well as their overdrive, Fairey has come up with manual freewheeling hubs which cut fuel bills, save wear and improve top gear acceleration. When the two wheel drive system is operating, the whole front wheel drive system is still engaged because the driveshafts, differential, and other transmission components are still connected to the front wheels. But with apair of the freewheeling front hubs, only the wheels rotate when the hubs are in the "Free" position. A quick turn of the nut in the center of the wheel hub, and four-wheel-drive can be used. Improved interior comforts and controls will widen the recreational appeal of the latest Land-Rovers, with a padded crash rail running the full width of the vehicle above and below the fascia parcel shelf. Most major controls are operated by a steering column stalk and there's an efficient fresh air heating system. Visibility is good from the high seats, but the seats don't go back very far and long-legged drivers find themselves crouching over the wheel. The aluminum bodied Land-Rover comes in a multiplicity of models, (27 to be exact) so vehicle specification can be tailored to meet your needs—a good point to remember for varying outdoor activities. Ride is still harsh and firm simply because the Land-Rover needs to be simple and sturdy. If you want the smooth ride, then the much more expensive Range Rover provides the answer. Rover says that most of their major commercial users prefer a harsh ride because so many Land-Rovers are driven by hired drivers who are inclined to drive harder than they should. The makers believe that the fact that the suspension gives drivers a rougtime if they try to overdo things is a safety factor! Unlike the Range Rover, the Land-Rover has short wheel movements, and most overseas buyers say they prefer leaf springs because they are easily replaced. Leyland has certainly widened the appeal of the Land-Rover with the latest developments, without disturbing the very qualities which made the vehicle famous in the first place. Current production is running at 1300 a week, and 900,000 have been built since the first Land-Rover appeared in April 1948, only 18 months after Rover decided to produce such a field-car. When Land-Rovers took to the roads, they offered comfort and amenities that weren't far removed from the average 1948 model car, but the gap has widened over the years as the Land-Rover concept remained largely unchanged. 1952 saw the engine increase from 1600cc to 2000cc, followed two years later by increases in the wheelbases of both the short and long wheelbase models. Rover introduced the 2 liter diesel motor to supplement the petrol engine in 1957, and by 1966 half a million Land-Rovers had been built.

Item 281 SUBJECT:

CARBURETTER FAST IDLE ADJUSTMENT

MODIFICATION: Revised method of adjustment.

MODELS:

Rover 2000 SC and Automatic.

Rover 2000 TC

1968 + AFTER

LITERATURE
AFFECTED:

Rover 2000 Workshop Manual, Part No. 605028, Operations N2 and N4
Rover 2000 Owners' Manual, Part No. 607038, Section 7.

REMARKS:

1. Warm up engine to normal running temperature.
2. Pull out the choke knob on to enrichment, and then push in to 14 mm–16 mm ($\frac{9}{16}$ in.– $\frac{5}{8}$ in.) from the console, and lock in position. Ensure the carburetter jets have returned fully home.
3. Loosen fast idle lock nuts and unscrew fast idle screw(s), until just clear of cams with throttle closed.
4. Turn the fast idle screw in by hand to obtain an engine speed of 1,500–1,600 r.p.m. Blip the throttle at each alteration of the fast idle screw to seat the screw. For T.C. models, turn each screw in by EQUAL amounts to obtain a fast idle speed of 1500/1600 r.p.m.
5. Re-lock the fast idle lock nut securely.
6. Push the choke knob in, pull it out again to enrichment then push it in to 14 mm–16 mm ($\frac{9}{16}$ in.– $\frac{5}{8}$ in.) from the console. Re-check the fast idle speed. PLEASE NOTE THAT THE CHOKE WARNING LIGHT HAS NO CONNECTION WITH FAST IDLE.

Distributors and Dealers are requested to amend the literature in their possession accordingly. The literature affected will be revised at the next available reprint.

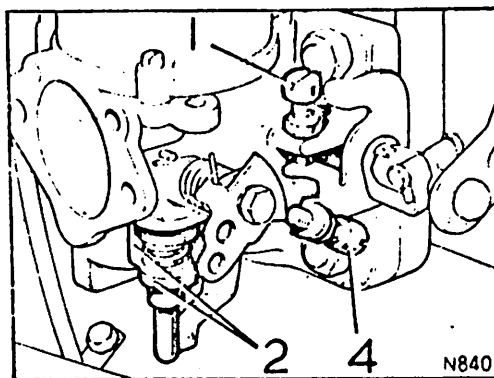


Fig. 4 Carburetter adjustment screws

Ref. 4 indicates fast idle screw SC and Automatic models

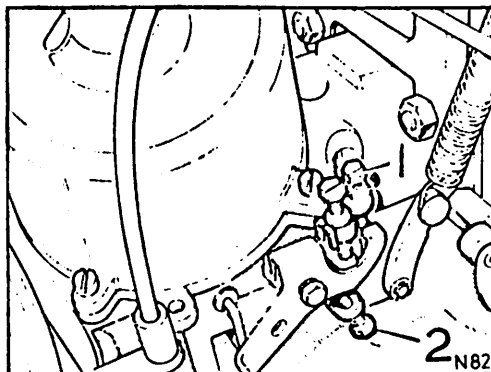


Fig. 5 Carburetter adjustment screws

Ref. 2 indicates fast idle screw TC models

Item 268 SUBJECT:

AUTOMATIC TRANSMISSION

MODELS:

Rover 2000 Automatic, Rover 3500 and Rover 3½ Litre.

REMARKS:

A few instances have been reported where the fibre washer, Part No. 267721, which fits underneath the new shaped gear lever knob, Part No. 576413, has been omitted during assembly. This could lead to a situation where the button in the knob, if pressed down sufficiently, releases the detent, thus making it possible to freely move the selector lever through all the gear positions without resistance, even with the vehicle in motion.

If the gear lever is dismantled for any reason, always ensure that the fibre washer is fitted on assembly.



1RC24

Fig. 2 Gear lever knob and fibre washer

ITEM: 323

SUBJECT:

EXHAUST MANIFOLDS

MODELS:

Rover 3500 and 3½ litre Saloon and Coupe, Morgan Plus 8. For Range Rover See Item 326

MODIFICATION:

Introduction of revised fitting procedure for exhaust manifolds.

LITERATURE
AFFECTED:

Rover 3500 Workshop Manual, English edition, Part No. 606495, Operation AAl - 11.

Rover 3½ litre Workshop Manual Supplement, English edition, Part No 605358, OperationA1 - 11.

REMARKS:

When fitting the exhaust manifolds the following procedure should be adopted.

The fixing bolts should be evenly tightened to a torque figure of 2.0 mkg. (15 lb ft). Do not turn up the locking tab washers at this stage.

Run the engine for at least five minutes, and re-check the torque settings.

Finally, turn up the locking tab washers so that they make full and close contact with the engaging hexagon face of the head of the set bolt.

Failure to follow this procedure could result in cracked or blowing manifolds.

The Workshop Manuals will be amended at the next available reprint.

Item 36 SUBJECT: **DYNAMO LUBRICATION**

MODELS: Rover 2000 SC, 2000 TC and 2000 Automatic.

REMARKS: Experience has shown that there is a danger of the dynamo bearing on the above models drying out on cars which, for one reason or another, are left standing for a long period. Will Distributors and Dealers please ensure that the appropriate dynamo lubrication is carried out on any Rover 2000 models which have been standing for any length of time. Although dynamo lubrication is specified at the Free Service, the point is that even running for 1,000 miles (1,500 km) with a dried-cut bearing, it will pick up and shorten its normal life, due to some extent to the position of the dynamo adjacent to the exhaust manifold.

Item 50 SUBJECT: **ENGINE OIL SUMP**

MODELS: Rover 3½ litre and Three Thousand Five.

MODIFICATION: Introduction of revised fitting and sealing procedure for engine oil sump.

LITERATURE AFFECTED: Rover 3½ litre Workshop Manual Supplement, Part No. 605358, Operation A1-14.
Rover Three Thousand Five Workshop Manual Supplement, Part No. 605893, Operation AA1-14.

REMARKS: Owing to minor discrepancies in alignment between the sump face of the cylinder block and the sump face of the front cover, it is essential that the following procedure is carried out:

1. Clean the sump mating surfaces at the join between front cover and cylinder block, using trichlorethylene or petrol.
2. Apply a coating of Hylomar SQ 32M approximately ½ in. to ¾ in. (12 mm to 18 mm) wide in the area 'A' at Fig. 1.
3. Fit engine sump gasket.
4. Proceed with sump fitting in the normal manner.

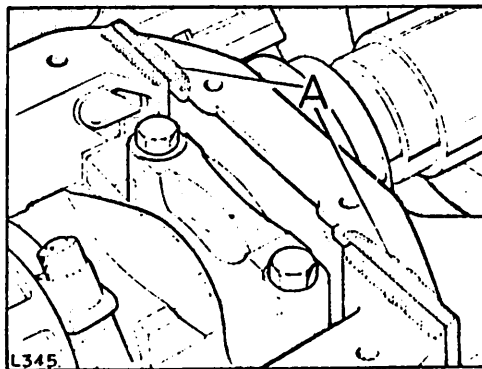


Fig. 1 Sealing cylinder block and front cover sump faces

A—Apply Hylomar SQ 32M in this area

Item 94 SUBJECT: **SPARKING PLUGS (Policy Item)**

MODELS: Rover 2000 TC.

MODIFICATION: Introduction of Champion N7Y sparking plugs.

LITERATURE AFFECTED: Rover 2000 Parts Catalogue, Part No. 606128, Pages 79 and 309.
Rover 2000 Workshop Manual, Part No. 605028, Page 99A.

PART NUMBERS: Sparking plug, Champion N7Y 4 606489
Oil recommendation label 1 578167

REMARKS: The Champion N7Y sparking plug provides a wider heat range and reduces the tendency of fouling up under certain operating conditions.
The new plugs must be fitted in sets of four.
The above Service Literature and the relevant Owner's Literature will be amended at the next available reprint.

MODELS: Rover Three Thousand Five and Rover 3½ litre.

REMARKS: If the engine of one of the above vehicles is persistently losing water and overheating, it is suggested, that before any expensive rectification work is carried out that a check be made of the by-pass hole in the water pump, as there is a possibility that this hole may be restricted or blocked by a flash of aluminium.

Proceed as follows:

1. Remove the water pump.
2. Inspect by-pass hole.
3. If there is any obstruction this should be removed with a sharp instrument, ensure that any material removed is cleaned from the pump body.
4. Replace pump, top up with coolant.

Item 302 SUBJECT: ENGINE FLAME TRAPS

MODELS: Rover 2000 SC, Automatic and TC.
Rover 3500, 3½ litre, Range Rover and Morgan Plus 8.

MODIFICATION: Replacement of flame traps instead of cleaning at service intervals.

LITERATURE AFFECTED: Rover 2000 Owner's Manual Part No. 607038, Section 7.
Rover 3500 Owner's Manual Part No. 607041, Section 7.
Rover 3½ litre Owner's Manual Part No. 605215, Page 6.
Range Rover Owner's Manual Part No. 606917, Section 7.

| | | | | |
|----------------------|--------------------|---|--------|---------------------------|
| PART NUMBERS: | Flame trap | 1 | 546505 | 2000 SC and Automatic |
| | Flame trap | 1 | 603330 | 2000 SC, Automatic and TC |
| | Flame trap | 2 | 603330 | All V8 engines |

REMARKS: In view of the difficulty in cleaning flame traps satisfactorily, it is recommended that they are replaced at service intervals of 20.000 km (12,000 miles). Distributors and Dealers are requested to amend the literature in their possession accordingly. The various Owner's Manuals affected will be revised at the next available reprint.

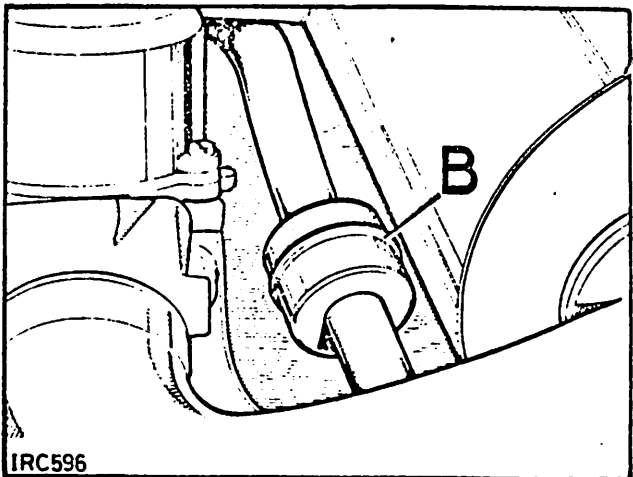
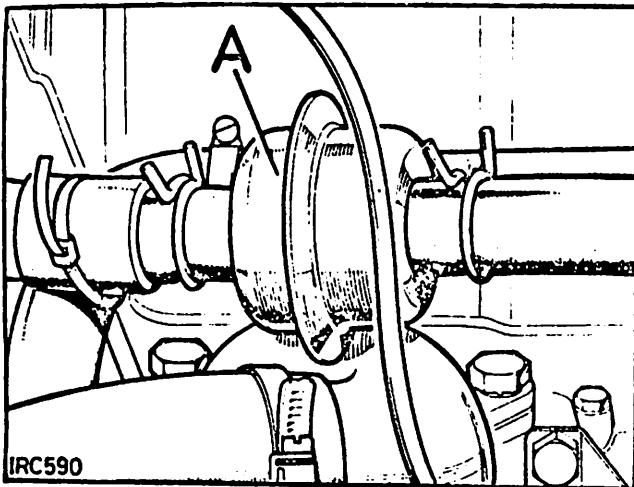


Fig. 2. Location of flame traps
A—2000 SC, illustrated B—3500 illustrated
Replace every 20.000 km (12,000 miles).

Item 278 SUBJECT: CLUTCH REPAIRS

MODEL: Rover 2000 S.C.

P.C.M.I.

TRANSPARENCY: The information detailed in this item will be incorporated in the next available transparency.

LITERATURE AFFECTED:

Rover 2000 Parts Catalogue, Part No. 606128, Page 53.
Rover 2000 Workshop Manual, Part No. 605028, Operation C1.

PART NUMBER: Clutch complete Unipart GCC 126.

REMARKS:

It has been brought to our attention that difficulty in operation and limited effective clutch plate life is sometimes experienced after clutch repairs have been carried out to earlier models. Investigations have shown that this has been caused by Distributors and Dealers failing to follow the instructions given in service News Letter Vol. 1, No. 46, item 323 and the Workshop Manual.

Early cars were fitted with clutch assembly Part No. 539772 which can be identified as follows.

Thickness from flywheel face to thrust pad 47,2 mm (1.860 in.)

Thrust pad, plain type (not strap supported).

Spring colour, dark blue.

To replace clutch assembly Part No. 539772 with Unipart GCC 126 it is essential to modify the clutch withdrawal housing in accordance with Fig 3.

Failure to carry out this modification will allow the flange on the clutch withdrawal sleeve to foul the nose of the clutch withdrawal race housing as clutch plate wear takes place, thus limiting the effective life of the clutch plate.

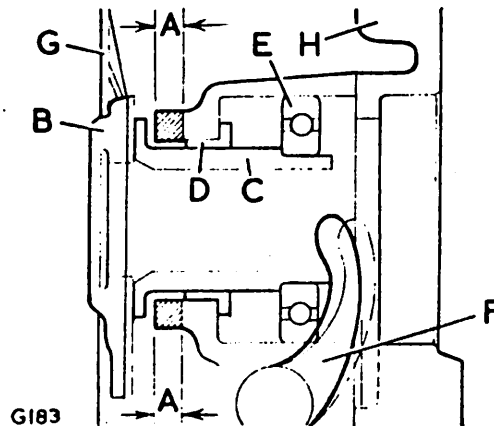


Fig. 3 Modification to clutch withdrawal housing

- | | |
|--|--|
| A—Reduce thickness of clutch withdrawal housing by approximately $\frac{1}{16}$ in. (8,5 mm) | E—Thrust bearing for clutch release sleeve |
| B—Thrust pad | F—Clutch operating lever |
| C—Clutch withdrawal sleeve | G—Clutch assembly |
| D—Bush for clutch withdrawal sleeve | H—Bell housing |

Item 153 SUBJECT: NOISE ON GEAR LEVER

MODELS: Rover 2000 SC and 2000 TC.

REMARKS:

Complaints of gearbox buzz and overrun rattle have been brought to our attention. Buzz is usually caused by either the nylon bush on the gear lever and/or the gear lever spherical seat bush being worn. These parts should be examined and replaced as necessary.

A rattle or rumble on the overrun is caused by slight gearbox to engine misalignment.

To rectify a rattle or rumble on the overrun, proceed as follows:-

- (1) Slacken off the bell housing bolts.
- (2) Slacken off the engine sump bolts and exhaust fixing on gearbox.
- (3) Gently tap the sump with a hide faced hammer, to break the seal.
- (4) Tighten the two bolts, sump to bell housing, ensuring that the sump does not distort the engine rear plate.
- (5) Tighten the remaining bell housing bolts, and finally the engine sump and exhaust fixings.

Item 84 SUBJECT: PRIMARY PINION LUBRICATION

MODELS: Rover 2000 SC and 2000 TC.

MODIFICATION: Lubrication of primary pinion and clutch plate splines on reassembly.

LITERATURE AFFECTED: Rover 2000 Workshop Manual, Part No. 605028, Operation C-1.

REMARKS: Reports received from our Service Representatives indicate that it is general practice to assemble the clutch driven plate to the primary shaft without the use of a lubricant.

As a result of this dry assembly, the corrosion of the splines on both primary shaft and clutch plate hub, which very often is the reason for dismantling the clutch in the first instance, will progressively impair the free movement of the clutch driven plate, which will eventually seize on the shaft.

In order to prevent subsequent seizures of this kind involving the time consuming and therefore costly removal of the engine and gearbox assembly, Distributors and Dealers are asked to apply a molybdenum-based grease, such as 'Copaslip', to the splines on the primary shaft and on the clutch plate centre before assembly.

The Workshop Manual will be suitably amended at the next reprint, but in the meantime Distributors and Dealers should alter item 2 of Operation C-1 on page 6C as detailed above.

Item 189 SUBJECT: BONNET CATCH

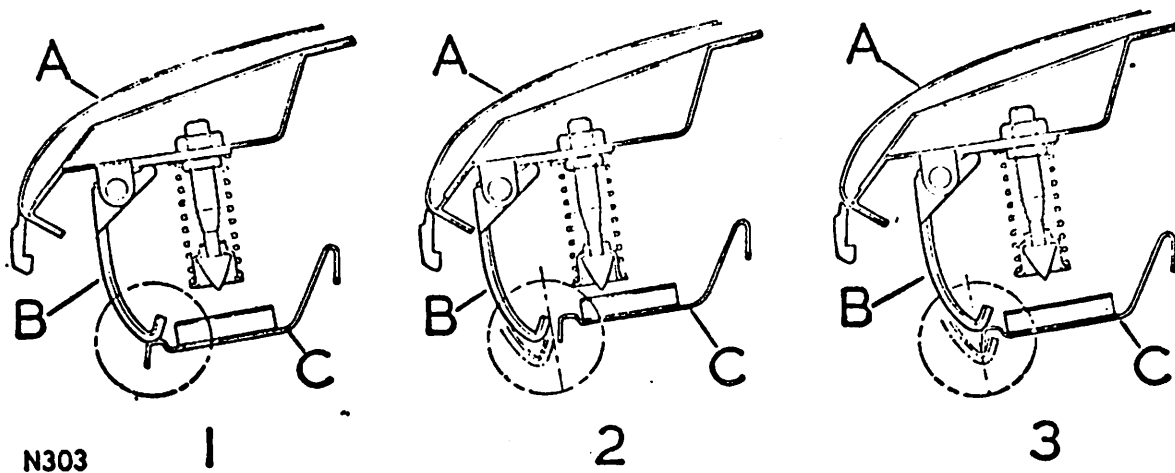
MODELS: Rover Three Thousand Five and 3500 S.

MODIFICATION: Introduction of checking and adjusting procedure for bonnet safety catch.

REMARKS: If during service the safety catch or the bonnet have been removed, it is necessary to check that the safety catch is correctly adjusted in relation to the bonnet lock platform panel.

With the correct adjustment, the safety catch should strike the panel for the bonnet lock platform at a point slightly forward of its peak, to ensure smooth engagement. See 'C' at Fig. 1.

If necessary, slacken the fixings and slide the safety catch backwards or forwards, until the correct setting has been obtained.



N303

Fig. 1. Safety catch adjustment

A—Bonnet B—Bonnet safety catch C—Panel for bonnet lock platform

1. Incorrect adjustment: Safety catch too far backwards
2. Incorrect adjustment: Safety catch too far forwards
3. Correct adjustment

Item 116 SUBJECT:

DISTRIBUTOR CONTACT POINTS

MODELS:

Rover 3½ litre.
Rover Three Thousand Five.

REMARKS:

In the event of distributor points having burnt out, or the 'Kemital' heel having melted, the vehicle wiring should be checked for poor condition. Having established that wiring condition is satisfactory, the 4TR alternator output control unit should be tested. The testing procedure to follow on Rover Three Thousand Five models is described in the Rover 2000 Workshop Manual, Part No. 605028, Operation QQ-3.

In the case of the Rover 3½ litre, the appropriate information will be found in the Workshop Manual Supplement, Part No. 605358, Operation S-5A-3.

If the alternator output control unit is functioning correctly, and the wiring is satisfactory, but the points are in a burnt condition, accompanied in some cases by a melted 'Kemital' heel, not only should the points be changed, but the condenser as well. It is important that the condenser is replaced to ensure that the points do not burn again shortly after having been replaced.

Check that there is no copper weld splash on the new points.

Contact points must be set with a Dwell meter as detailed in the appropriate Workshop Manual.

Item 301 SUBJECT:

CONTACT POINTS BURNING

MODELS:

Rover 3½ litre, 3500 and Range Rover.

MODIFICATION:

Revised checking procedure.

**LITERATURE
AFFECTED:**

Rover 3½ litre Workshop Manual Supplement, Part No. 605358, Section S.
Rover 3500 Workshop Manual Part No. 606495, Section Q.
Range Rover Workshop Manual Part No. 606893, 86.10.08.

REMARKS:

If burning of the contact points or melting of the 'Kemital' heel is experienced items should be checked in the following sequence:-

REGULATOR 4TR (3½ litre and 3500). On 3½ litre models located under the bonnet adjacent to the fuse block.

On 3500 models readily accessible when the L.H. glove box is opened.

REGULATOR 8TR (Range Rover) located in the alternator.

1. Check condition of wiring and rectify if necessary.
2. Initially adjust the existing contact points by means of a dwell meter sufficiently to start and run the engine.
3. Warm the engine and regulator by running at 3000 rev/min for at least 8 minutes to ensure the system voltage has stabilised.
4. Reduce the engine speed to 2000 rev/min.
5. Place a voltmeter across the battery terminals; if reading is in excess of 14.5 volts, the regulator must be considered unserviceable and replaced.

If an excessive charge is allowed to pass through the system, burning of the contact points will occur.

BALLAST RESISTANCE

1. Stop the engine. Switch on the Ignition again.
2. Ensure that contact points are closed.
3. Introduce a voltmeter between the positive terminal on the coil and earth.
4. If full battery voltage is recorded, then the ballast resistance wire must be

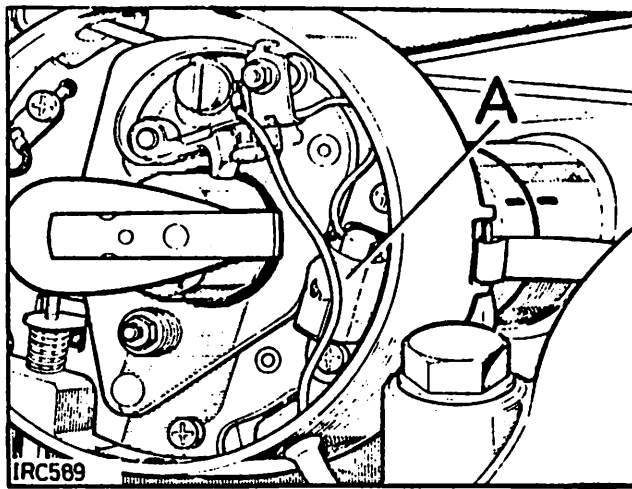


Fig. 1. Location of condenser

A—Condenser

suspect and replaced. On early cars this was an independent wire with a fixed resistance but on later cars it is incorporated in the main dash harness which would have to be replaced.

5. The correct reading should be 6–7 volts.

Should full battery voltage be allowed to pass through the contact points, burning will result.

CONDENSER

1. With the engine stopped, examine the condenser connections.
2. If connections are dirty and loose, arcing of the contact points will occur.
3. Rectification in this case, after checking regulator and ballast resistance, will be to renew the contact points, clean and tighten condenser connections and reset the distributor.

If the above items are found to be in good order, then the contact points themselves must be suspect. Rectification should be effected by replacing the contact set and condenser. Ensure that there is no copper weld splash on the new contacts.

It is essential that condenser Part No. 606594 is fitted and this may be identified by a spot of blue paint on the body.

This News Letter Item contains the latest information and summarises that previously circulated in News Letters Vol. 3, Nos. 8, 9 and 10, items 116, 138 and 152.

Item 209 SUBJECT:

AUTOMATIC ENRICHMENT DEVICE

MODELS:

Rover Three Thousand Five, 3500 S.

Rover 3½ litre.

REMARKS:

A number of A.E.D. units are being returned as faulty, and when tested are found to be quite serviceable. Before removing an A.E.D. the following checks should be carried out.

To check for rich mixture and poor starting when hot

1. Check carburettor tuning.
2. Check the hot air pick-up for leaks. If leaking, renew the gasket. Check the plate for distortion and refit carefully.
3. Tap the float chamber lightly to ensure float is not sticking.

To check for weak mixture and poor starting when cold

1. Check carburettor tuning. The usual cause of stalling and cutting out is a weak carburettor setting after the A.E.D. cuts out.
2. Check that the A.E.D. is fitted at the correct angle so that it does not push or pull the delivery hose, causing it to leak.

Distributors and Dealers should ensure that customers are aware of the correct starting procedure with this type of automatic choke. When starting a Rover V8 engine fitted with A.E.D. no throttle should be used if the engine is cold; with a warm engine a very slight throttle opening should be used.

Item 118 SUBJECT: STEERING RELAY UNIT

MODELS: Land-Rover Bonneted Control models.

MODIFICATION: Introduction of steering relay unit oil level check at the 6.000 kms (4,000 miles) maintenance period.

LITERATURE AFFECTED: Land-Rover Owner's Maintenance Manual, Part No. 606162.

REMARKS: Some cases of steering relay seizure have been found to be caused by lack of lubrication.

The relay unit oil level should therefore be checked every 6.000 kms (4,000 miles). The oil should be clearly visible through the bolt hole in the relay top cover. Top up, as necessary. If significant topping up is required, check for oil leaks and fit new joint washers as necessary. The lubricating oil should not normally need replenishing between overhauls. Full details of the unit overhaul procedure are given in Land-Rover Workshop Manual, Part Two, Part No. 606408, Operation G1-10.

If necessary, top-up as follows:

1. Remove name plate and withdraw the radiator grille.

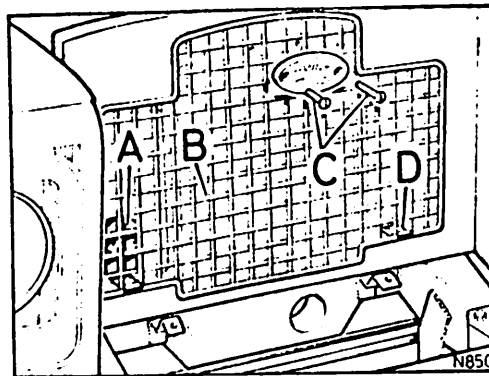


Fig. 2 Radiator grille

- | | |
|-------------------------------------|-----------------------|
| A—Radiator grille | C—Support brackets |
| B—Fixings for name plate and grille | D—Steering relay unit |

2. Remove two of the bolts securing the relay top cover.
3. Using one of the holes as an oil filler (the other acting as a breather hole), fill the relay unit with the correct grade of lubricating oil to the bottom of the filler hole. Whilst filling, it is probable that oil will eject through the breather hole. If this occurs, DO NOT assume the relay unit is full. The oil has to creep through the channels between the two segments of the split bush, and this process is slow. Therefore, the upper chamber fills rapidly and oil escapes through the breather hole. Wait a few moments, until the breather hole is clear of oil, and then continue filling.

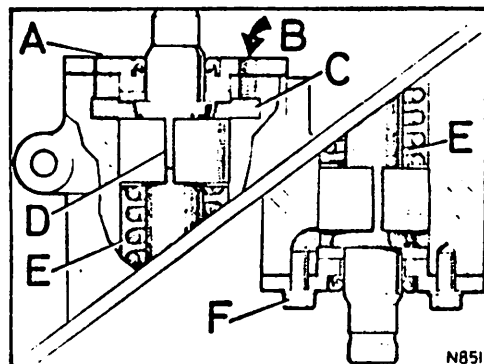


Fig. 3 Steering relay unit

- | | |
|-----------------|---------------------------------|
| A—Breather hole | D—Channel between bush segments |
| B—Oil filler | E—Main chamber |
| C—Upper chamber | F—Drain hole |

As the unit fills up, air is forced out usually in the form of an oil bubble escaping through the breather hole, again giving the impression that the unit is full. Wait for the bubble to subside, then continue filling. Continue this process, until the oil is clearly visible at the base of the breather hole and the filler hole. It takes approximately six minutes to completely fill a relay unit using this method.

4. Replace the two top cover bolts.
5. Refit the radiator grille and name plate.

Recommended lubricants

| Component | SAE | BP | Castrol | Duckham's | Esso | Mobil | Regent Texaco- Caltex | Shell |
|---------------------|------|-------------------------|------------------|------------------------|----------------------------|-------------------|-----------------------------|-----------------|
| Steering relay unit | 90EP | BP Energol SAE 90 EP | Castrol Hypoy | Duckham's Hypoid 90 | Esso Gear Oil GP 90/140 | Mobilube GX 90 | Multigear Lubricant 90 | Spirax 90 EP |

Item 136 SUBJECT: PAINTING 'BIRMABRIGHT' BODY PANELS

MODELS: All Land-Rovers.

LITERATURE AFFECTED: Land-Rover Workshop Manual, Part Two, Part No. 606408, page 5-Q.

REMARKS: The following paint instructions supersede the information given in the Workshop Manual:

Pre-treatment by etch priming

After thoroughly cleaning the surface, some further form of pre-treatment is essential before painting, and the use of I.C.I. Etching Primer PS65-5002 is recommended. It is quick and easy to apply, and it prolongs the life of the paint by ensuring excellent adhesion.

Application

Activate the Etching Primer by mixing it with an equal volume of Activator P273-5021 and allow to stand for 10 minutes. Adjust the spraying viscosity of the mixture if necessary to 22-25 sec. BSB4 Cup by adding small quantities of Thinner 851-565; never add more Activator. Apply by spray to a clean, dry surface in a thin uniform coat rather than a thick heavy one, which may impair adhesion.

Air dry for at least 15 minutes before applying undercoat by spray or for 2 hours before brush application. If required, these times can be shortened by force drying, this also gives increased hardness to the film.

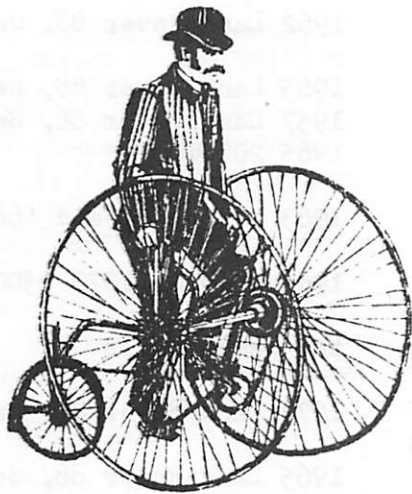
Apply Etching Primer as soon as possible after cleaning, and paint as soon as the pre-treatment is completed. Undue delay may cause the surface to be contaminated again and thus nullify the treatment. Do not leave pre-treated work overnight before it is painted.

The activated Etching Primer has a limited pot-life of about 8 hours at normal temperatures and should not be used after this time, as it may have inferior adhesion and corrosion resistance. Any Etching Primer which has been mixed for more than 8 hours must be thrown away, and not returned to the can.

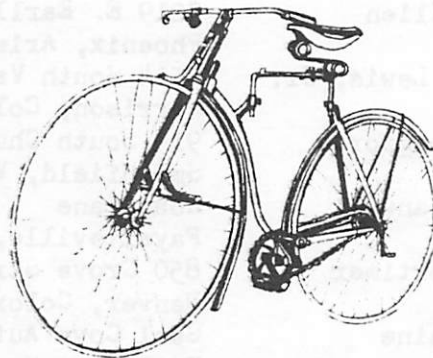
Subsequent painting follows normal paint shop practice.

Etching Primer, when followed by a suitable paint system, gives a film which is very resistant to moisture, but the Etching Primer itself is water sensitive. It should therefore be coated with paint as soon as possible when it is dry.

When wet flattening the subsequent paint layers take care not to rub through to the Etching Primer. If this does occur allow to dry out thoroughly, dry flat the area and spot in with Etching Primer.



ROVER
TRICYCLE
1884



ROVER
SAFETY
BICYCLE
1885

- WANTED:** Land-Rover literature, especially older official manulas, parts catalogues, sales literature, including Sleasman's Manual, also road tests (Autocar, etc). Will buy or trade for duplicates in my collection. Contact: Norman F. Lewis.
- FOR SALE:** Complete set of 11" brakes from 6 cylinder 109, includes shoes, back-plates, drums, and cylinders (except master cylinder). Contact: Norman F. Lewis, Jr., 4514 So. Van Gordon Way, Morrison, Colorado, 80465.
- FOR SALE:** Member Wolfgang Klien will be touring Central and South America in the next few months and has remodeled his Land-Rover for use as a camper. As a result, he has a full width rear bench seat, center front seat and back, and a stl. bar behind front seats for sale. He will sell them for minimal charge to anyone that is willing to pay the freight from Phoenix and can make good use of them. The items are in good condition with no tears. Contact Wolfgang at: 3219 E. Earll Drive #10, Phoenix, Arizona, 85018.

RENEWAL MEMBERS:

| | | |
|---------------------|---|--|
| David Barrett | 430 West 24th Street New York, New York, 10011 | 1970 3500S |
| Dexter Bradbury | Route I, Box 51A Glade Hill, Virginia, 24092 | 1972 Land-Rover 88, Series III |
| Creighton E. Dennis | 769 Cypress Walk, Apt. M Goleta, California, 93017 | 1973 Land-Rover 88, Series III |
| Jack K. Grimm | Route 1, Box 337C Evergreen, Colorado, 80439 | 1969 2000TC |
| Ron Jones | 204 Dinn Road San Antonio, Texas, 78218 | six 2000S's, fifteen 2000TC's |
| John F. Katenkamp | 100 Spindrift Drive Portuguese Bend, California, 90274 | seven 3500S's, Land-Rover 109 1968 Land-Rover 109 Dormobile 1974 Land-Rover 88, Series III |

RENEWAL MEMBERS:

| | | |
|----------------------|--|--|
| Wolfgang Klien | 3219 E. Earll Drive #10 Phoenix, Arizona, 85018 | 1962 Land-Rover 88, Series IIa |
| Norman F. Lewis, Jr. | 4514 South Van Gorden Way Morrison, Colorado, 80465 | 1965 Land-Rover 88, Series IIa 1957 Land-Rover 88, Series I |
| Desmond Longford | 919 South Church Street Smithfield, Virginia, 23430 | 1965 2000SC |
| Reginald Manwell | Hoag Lane Fayetteville, New York, 13066 | 1963 110, 1967 and '68 2000TC's |
| Dail W. Mortimer | 850 Grove Street Denver, Colorado | 1967 2000TC, 1970 3500S |
| Richard Paine | Seal Cove Auto Museum, Box 900 Southwest Harbor, Maine, 04679 | two Land-Rovers |
| Harlan F. Sawyer | Route 1, Bee Tree Road Swannanoa, North Carolina, 28778 | 1973 Land-Rover 88, Series III |
| Robert Ulanoff | 31 Savage Road Kendall Park, New Jersey, 08824 | 1965 Land-Rover 88, Series IIa |

NEW MEMBERS:

| | | |
|----------------------|---|---------------------------------|
| Edward Aho | 815 Mt. Kisco Road Armonk, New York, 10504 | 1974 Land-Rover 88, Series III |
| George L. Brown | 8297 Delhi Road Charleston Heights, South Carolina, 29405 | 1970 3500S, 1971 2000TC |
| Thomas Andrew Dorian | 1958 Fircrest Drive Eugene, Oregon, 97403 | 1973 Land-Rover 88, Series III |
| Thomas Farren | 24507 86th Avenue E Graham, Washington, 98338 | 1971 Land-Rover 88, Series IIa |
| P. A. Grayce | 1105 Wedgewood Road Flourtown, Pennsylvania, 19031 | 1974 Land-Rover 88, Series III |
| Philip E. Hunter | RFD 2, Box 20 West Brattleboro, Vermont, 05301 | 1974 Land-Rover 88, Series III |
| John R. Ludwig | 326th ASA Co. APO, New York, 09178 | 1972 Land-Rover 88, Series III |
| John R. Mercer | 1313 A South York Gastonia, North Carolina, 28052 | 1973 Land-Rover 88, Series III |
| Allan Merralls | Portuguese Bend Club Portuguese Bend, California, 90274 | 1966 Land-Rover 88, Series IIa |
| Michael Rigsby | 1144 Washington #2 Oak Park, Illinois, 60302 | 1972 Land-Rover 88, Series III |
| Bill Slunt | Box 5959, Station A Calgary, Alta, Canada | 1969 Land-Rover 88, Series IIa |
| Terry Stinson | P.O. Box 456 Port Aransas, Texas, 78373 | 1973 Land-Rover 88, Series III |
| Robert G. Torgersen | 3 Main Drive Nanuet, New York, 10954 | 1967 Land-Rover 109, Series IIa |
| James E. Trogdon | 3135 Garden Circle, Apt. 17 Shingle Springs, California, 95682 | 1961 Land-Rover 88, Series II |
| Bruce E. Van Deuson | 4840 Sullivan Boulevard Virginia Beach, Virginia, 23455 | 1972 Land-Rover 88, Series III |
| Paul Arthur Wright | 619 East Spring Street Whitehall, Michigan, 49461 | 1974 Land-Rover 88, Series III |
| Thomas Yokubinas | 65 Kerin Drive New Britain, Connecticut, 06053 | 1974 Land-Rover 88, Series III |

More Land-Rover Interchange Information: The following interchange information is provided courtesy of member Norman Lewis.

Ignition Parts for Land-Rover (American Auto Parts, "Powercady")

| Year & Model | Points | Condenser | Cap | Rotor | Coil | Generator Brush | Star'er Brush |
|---|--------|-----------|--------|--------|----------------------|-----------------|---------------|
| '54 - '55 2 litre SerI | 31-403 | 32-404 | 33-402 | 34-400 | 35-3 (epoxy) | 310-400 | 311-401 |
| '56 - '58 2 litre SerI | 31-407 | 32-407 | 33-402 | 34-400 | 35-3R _{oil} | 310-400 | 311-401 |
| '58 - '69 2½ litre petr Ser II, IIa | 31-407 | 32-407 | 33-408 | 34-400 | 35-3R | 310-400 | 311-401 |
| '67 - present 2.6 litre pet Ser. IIa, III | 31-407 | 32-407 | ----- | 34-412 | 35-3R | 310-400 | 311-401 |
| '70 - present 2½ litre petr Ser IIa, III | 31-407 | 32-407 | ----- | 34-400 | 35-3R | 310-400* | 311-401 |

* Not for Ser. III with alternator

NAPA Ignition Components (add to list in Vol. IV, Number 1)

| Series I, Year | Points | Condenser | Cap | Rotor | Generator Brush |
|----------------|---------------------|-----------|--------|-------|-----------------|
| '48 - '53 | CS 201 | EP 22 | EP 39* | EP 41 | 401 |
| '54 - '55 | CS 204 | EP 25 | EP 39 | EP 41 | 401 |
| '56 - '58 | CS 207A assembly | EP 29 | EP 39 | EP 41 | 401 |

* Can be used, but doesn't match original cap.

Additionally, Norman Lewis provided some photos he took on a recent tour of the factory as well as the following comments.

Concerning the matter of the oldest Land-Rover and highest mileage in the U.S. I can contribute the following data. The oldest Land-Rovers I know about in the U.S. (though probably not the oldest) are:

- 1) Series I "80", chassis 16131323, a 1951 model in a wrecking yard at Moab, Utah
- 2) Series I "80", chassis 16131929, a 1951 model in the Denver-Boulder, Colorado area
- 3) Series I "80", chassis 16136879, a 1951 model seen in Denver, Colorado

All are LHD basics (no hard tops or soft tops). People have told me of older models (1949) on the West Coast, Southern California, and Mexico, but this hasn't been verified. Possible some members out that way will know. (Member Bob Bernard in Redwood City, Cal. has a Series I "80", chassis 06107360, 1950 model). As for the highest mileage, in the May, 1969 issue of Four Wheeler magazine a W.E. Dill, Jr. of Phoenixville, Pa. wrote stating that he had a 1952 Land-Rover with "over 300,000 miles" on it. He also claimed to have a 1965 Landy with 170,000 miles. That was over five years ago so the mileage on both now could be much greater.

Members may be interested in the following data. On the Land-Rover 2½ litre and 2.6 litre engines there is an American made oil seal available for the timing cover. It is Chicago Rawhide (C?R) seal #19220, which is a double lip seal instead of the single lip seal as is normally used on the timing cover. This double lip seal appears to seal