



the ALUMINUM WORKHORSE

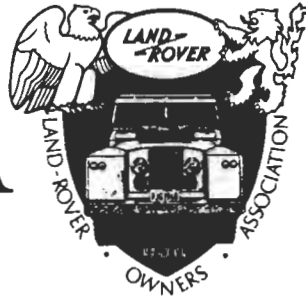


OFFICIAL PUBLICATION OF THE LAND-ROVER OWNERS' ASSOCIATION

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LROA



NEWS

Winter 1990 - LROA, P.O. Box 6836, Oakland, CA 94603
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An embarrassing moment for the editor in Moab. Photo by Bill Reid(ID).

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Steve Hill put this 109 into his garage a few years ago to make some improvements...wonder what it looks like now



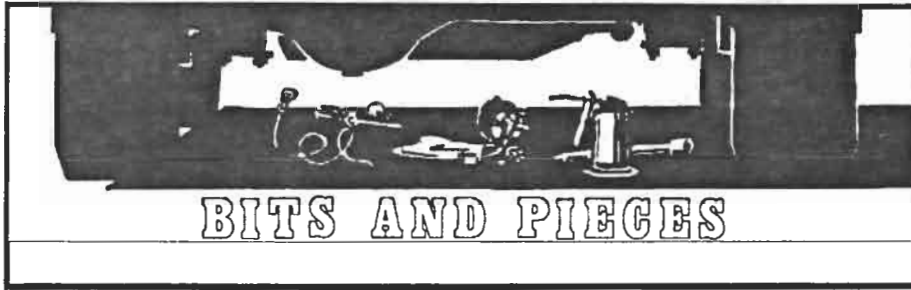
Scotty's
Foreign Car Service
Est. 1960 British Trained

**THE Authority on
Chevrolet Engine
Conversions in
Land-Rovers**

Many Hard-to-Find Parts
.....

415-432-2221

650 Garcia Ave #2 Pittsburgh, CA 94565



LAND-ROVER BADGES... Steve Johnson of Dixieland Rovers has sent in a sample of the new badges or plates that he has had made up. These are really nice! They are aluminum with the Rover colors. They have holes for mounting just like a license plate. If you are interested in acquiring one or two, he will sell them to you for a mere \$5. Not bad!

We tried to get this out before Xmas but things don't always go the way we'd like them to. Didn't even have time to ship it off to Paul for printing...sorry Paul, how about next time

So, anyway...Happy New Year!

New member, Nick Davis(TX), dropped us a line. They have 2 109s... one ('71) restored, the other ('65) had it's restoration started this past summer.

Nick runs "Fossil Rim", one of the country's largest drivethrough wildlife centers. They use the Rovers to guide their guests around the place.

Nick was wondering if any club members might be interested in making Fossil Rim the destination of a "run".

Wouldn't you just love to take some pics with your Rover right next to a bunch of great big kituys?

I passed the info along to R.C. Chuck Willis in TX. Or your mail can reach Nick at P.O. Drawer 329, Route 1, box 210 Glen Rose, TX 76043



Here's a pic of a rover with Steve Johnson's Land-Rover badge on the right rear panel.

OFF-ROAD DRIVING SCHOOL? Myles Murphy (ME) has been quite helpful as of late with articles and good advice. It seems that he's planning to start up a company to be called Overland Rovers Expedition Service in the next year or so. As the name implies, the company will not be limited to driving school, but will also be involved in organizing expeditions for interested parties. Interested? Give him a call.... 207-342-5055.



A recent aquisition by Jack Kelly showed up at the British Field Meet in Oregon this year. There were 22 Rovers this year. Photo from Doug Shipman

Still no volunteer attorneys, but we have a couple of phone numbers of new Rover owners who are in the business. Anyone want to volunteer to call?

REGIONAL NEWS & CALENDAR



IF YOU DON'T SEE ANYTHING FROM YOUR REGION IN THIS SECTION, GIVE YOUR REGIONAL COORDINATOR A CALL AND SUGGEST THAT HE SEND SOMETHING IN. FOR INFORMATION ABOUT ANY OF THE EVENTS LISTED HERE, CONTACT THE REGIONAL COORDINATOR FOR THE AREA. R.C. NAMES AND ADDRESSES ARE LISTED ON THE INSIDE FRONT COVER PAGE OF THIS ISSUE.

MOUNTAIN STATES

- March 15...Movie Night - 1989 Camel Trophy.
- May 18...All British Car & Motorcycle Show. Salt Lake's First!
- June 14-16...Weekend Campout & Exploration. Deep Creek Mountains, UT.
- August 17-25...3rd Annual Rally. Moab, Utah - San Juan Mountains, Colorado.
- September 14...Annual Liberty Park Gathering & Trailride.

N. GEORGIA

- May 19...North Georgia British Motorcar Day at the Chateau Elan Winery, just off I-85, about 45 miles north of Atlanta, Georgia.

This event is an annual gathering of all the local British car clubs to benefit a local charity and generally draws 300-400 participants. The local Land-Rover Owners have participated in this event every year for all seven annual meetings. There have been as many as 14 Land-Rovers attending from as far away as South Georgia, Alabama, and North Carolina, and it is hoped that there will be as many as 30 Land-Rovers attending this next event. You can expect a hand-crafted trophy for the peoples' choice of the best Rover in attendance. There will also be trophies for the best 109, 88, and Range-Rover.

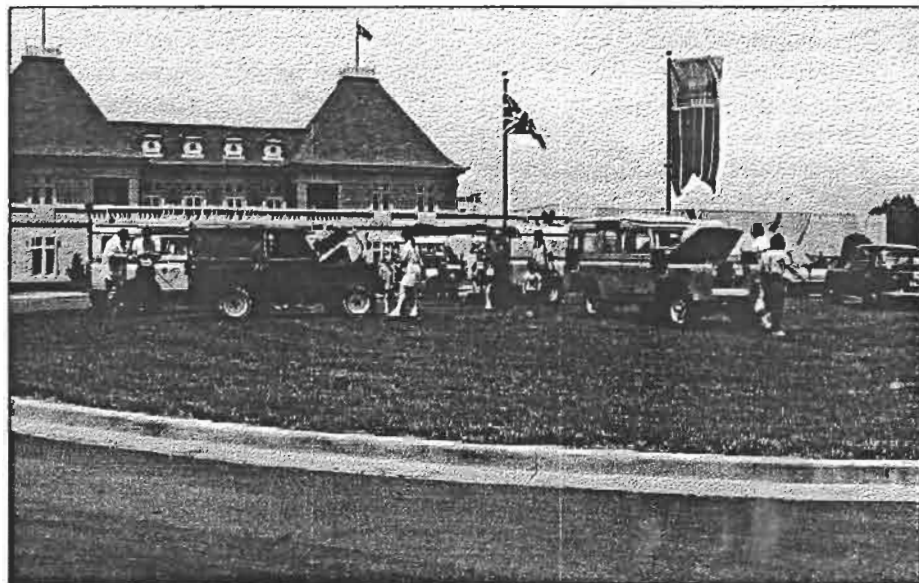
•Land-Rover Picnic at Amicalola Falls State Park (N. Georgia) in the Spring, followed by an interesting drive through some unimproved dirt trails and fire roads in the Chattahoochie National Forest. Very scenic, challenging, not threatening. more details next issue.

NORTHWOODS

Regular events scheduled on the 3rd Sunday of most months...check with your R/C.

OREGON

- April 27-28...Annual Northwest Challenge in Oregon Coast Range
- Memorial weekend...Central Oregon Run
- July 6-7...Annual July Run - Safari trip
- Labor Day Weekend... All British Field Meet.



British Motorcar Day, 1989 in GA



BMCD, '90...John Lewis & Carolyn picnicing w/ his restored 109

NORTHEAST

The Third Annual Down East Land Rover Rally will be held in Mid-Coast Maine on June 29 and 30, 1991. This is a Land Rover Rally with a difference.

All Roverists are invited to arrive before hand and to hang around afterwards; you will be taken care of. Stay with local Land Rover owners, camp out, bed and breakfast it, use a motel, hotel, or whatever you desire. On June 29th, we'll have non-spring-bustin' off-road drives through scenic mid-coast Maine: plenty of things to do and places to see. Sunday, June 30 we'll be at the Owls Head Transportation Museum. All those arriving in a Rover, whatever make or condition, will have free access to all the museum's facilities, including a special parking/display area which affords a grandstand view of a full day's airshow. All makes of Land Rover will be present and there will be an indoor display of an early Series I and the latest Range Rover along with a full photo display of Land Rover development. Land Rover factory videos will be shown all day in the museum's cinema. There will also be a winching demo and a demo of a PTO (power take-off) running various pieces of machinery.

Ted Howard of the St. George Rover Co. will be on hand with a trailer-mounted 2-1/4 petrol engine and gearbox assembly to demonstrate engine tuning and fault finding and to answer technical questions. There will be many other experts around offering advice as well.

Several Land Rovers were sold at last year's rally — so, you know what to do. Bring along that spare Rover from out in the barn as well as those parts you have been trying to get rid of.

Land Rover specialist companies are invited to attend, but big banners and sales booths are discouraged. Company name on a vehicle door or side will be acceptable. Soliciting fellow Roverists and the usual crowd of 5-6000 is okay, too.

Everything is free (you help with the food and buy your own gas).

Interested? For details, contact Myles J. Murphy
RR 1, Box 905
Morrill, ME 04952

OREGON COAST

September 28-29...Camp Rilea Outing. Stay in military huts for weekend and drive army obstacle course.

S.F. BAY AREA

•March 8-10...Land-Rover Owners' Spring Training Camp at Hollister Hills SVRA (about 45 miles south of San Jose). Geoff Jackson has booked Garner Lake Camp (area gate 5) exclusively from Friday evening March 8, '91 through Sunday night March 10, '91. All LROA members and friends are invited to participate.

Come and sharpen your skills for the summer treks.

Information and maps are available from the rangers at 408-637-3874. Saturday night will feature one of Gordon Kallio's excellent multi-media programs.

Please inform Geoff Jackson at 408-629-8274 (eves) as soon as possible.

S. CALIFORNIA

•February 2-3...Atlantic British West Coast Rally - Borrego Springs (Anza Borrego Desert) - only 2 hrs from L.A. Off road tour, dinner, awards...sound good? Call Atlantic British (NY or CA) for details.



just part of the lineup at the 2nd Maine Land-Rover Rally

•new club•

The Land Rover Club of New England and the Maritimes

a regional affiliate of the LROA

Putting like-minded people in touch in (US) ME, NH, VT, NY, NJ, RI, CT, MA (Canada) NB, NS, PEI

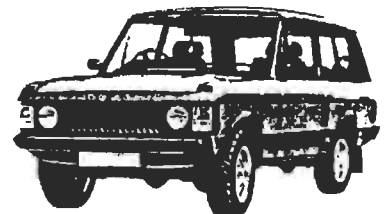
Official club launch 30 June 1991 at the Third Annual Down East Land Rover Rally—the East Coast's largest club-organized Land Rover, Range Rover, and Rover auto rally.

For details of the LRC, the Down East Rally, and other regional events write to:

*Myles J. Murphy
RR 1, Box 905
Morrill, ME 04952*



WEST COAST BRITISH



FOR SALE: 1973 RANGE ROVER; 2200+ miles on fresh & HOT V8: Crane Cam & Lifters, HP Timing chain & gears, Offy Dualport manifold w/Holley 390cfm 4bbl carb, TR8 valves, teflon valve seals, 8.9:1 compression .020" Pistons, Flex-fan, new Lucas Dist., everything else fresh, including clutch assy. 3000 miles **since** Diffs/axles/hubs were overhauled. Heavy-duty Road Springs front/rear, Bilstein Gas shocks - 2-front/4-rear. AVON Rangemaster 205R16 tube tires (5). All gauges including tach. NEW Vogue carpets (less rear) and door panels. *Bush Guard/F-lamp guards/bug shield/lamps available at extra cost* Body 98% straight (have extra tailgate). Paint good (goldytan colored). Might consider partial trade for GOOD Land Rover (NO Chevy-6's). MAKE OFFER.

FOR SALE: PARTS CLOSE OUT: Used 2½-litre ('73), doesn't run, good head, CHEAP! Misc NEW Land Rover parts, which include; seals, brake shoes & hyd kits, gaskets, filters, engine parts (4-cyl & V8 & 6-cyl?), PLUS; some used items. Would prefer to sell all in one lot.

WANTED: Late 1969 thru 1971 Land Rover 88". Must be complete 4-cylinder, AND driveable! NO rust or damaged rear body sections please. NO STUPID prices.

FOR SALE: Not in yet, but coming: '64 109" Wagon, fully restored by us some years ago. Chevy 250-6. Overdrive. British Racing Green w/white top & wheels. 10,000 miles since body off overhaul. \$15,000.00
Two 1967 109" NADA 6-cylinder Wagons. Please call for details when they arrive.

WEST COAST BRITISH/WCBR 6398 DOUGHERTY RD #34, DUBLIN, CA. 94568 (415)829-6091 leave mess.

LAND ROVER OWNERS ASSOC
P.O. BOX 6836
OAKLAND, CA 94603

Letters



THE FOLLOWING LETTERS ARE THE VIEWS OF THEIR AUTHORS AND NOT NECESSARILY THOSE OF ANYONE ELSE.

Moab Thanks from Bill Davis (UT)

THANKS, everyone for showing up for the National rally in Moab this year. It turned out to be a very successful event. So successful, in fact, that we have decided to repeat the event next year. The schedule will be approximately the same... Aug. 17 thru 25. We are tentatively planning on adding some 2 - 3 day side trips to surrounding areas such as the San Juan Mountains across the border in Colorado, in conjunction with the Solihull Society. Any persons or organizations that would like to help organize or sponsor this year's event, please contact me or Kerry Oldham. Check R.C. listing for address.



Kerry Oldham (L) & Bill Davis (R) at the Moab rally last Summer.
Photo...Craig Hansell

Call to Action by Jack Walter (GA)

You may have read of the Land-Rover Discovery, a new mid-range vehicle from the makers of Land-Rover and Range-Rover. Range-Rover of North America is being non-committal about when this new Land-Rover will be imported to the U.S.

We need to do everything we can to encourage Land-Rover Ltd to export this new four wheel drive to the United States to be sold along side of the more expensive Range-Rover. I propose that we each write a letter to the home offices in Solihull, England and express our interests in the Land-Rover Discovery. Let them know that the loyal Land-Rover enthusiasts in this country are tired of waiting for Land-Rover to re-enter the U.S. market with a vehicle that we can afford.

How many of you would like to own a 110 or 90? Write to L/R and tell them so. If Daihatsu and Suzuki can find a way to import the Rockys and Samurais, why can't Land-Rover bring in their vastly superior 90's and 110s? If Jeep can still sell such dinosaurs as the Wrangler with it's limited capacity leaf springs, it's not because there isn't a market for the true utility 4x4 in this country. I have experienced the superiority of the 110 in a ride at the factory and would readily spend \$25,000 for a 110 Land-Rover with the new direct injection 107 hp Turbodiesel.

The address is:

Colin Green,
Mgr Discovery Product Marketing
Land Rover Ltd
Lode Lane, Solihull
West Midlands B92 8NW
England

Please write to Land-Rover... one letter may not make much of an impression on them but several thousand letters might encourage them to respond to the people that have remained loyal to the Land-Rover and still consider it to be the best 4x4 far.

(Jack says that he recently wrote to L/R in England. Mr. Green wrote back with a nice letter thanking him for his interest in the vehicle and acknowledging the possibility of the Discovery being imported to the U.S. in "the not too distant future". Editor)

Dear Aluminum Workhorse,

I thought you might be interested in an item I've come across and pass it along to the membership through the newsletter.

A LUCAS, PRINCE OF DARKNESS T-shirt is available from a company called Photo-Rific
10815 S.W. 57th Ave
Portland, Oregon 97219

It's a black shirt with yellow graphics and is currently offered in their summer 1990 catalogue for \$9.50.

As I wrote in my previous letter, I hope that new club decals will be approved by the treasurer... an organization such as this needs an emblem to be recognized by. Even if a small additional charge is needed I'm sure that others (as well as myself) would see it as appropriate. Hope you agree.

Mike Bross, NC

Dear Workhorse,

The picture on page one of the spring issue of the Aluminum Workhorse is of me changing the dynamo on my '61 88 (named Reginald) at our cabin in Mono City (NV?). The Prince of Darkness strikes again.

I would like to put together a Land-Rover get-together like the one in San Jose down here in So. California. Any suggestions would be helpful.

I vote yes on the badges. I have some connections in Taiwan if that would be helpful.

P.S. A good question for the next Aluminum Workhorse might be...How many people name their Land-Rovers and what are their names?

Rod Mac Duff, CA

*That is a good question. I've heard of Land-Rovers being called many names (you walked right into that one). Tenacitus (Latin? for tenacious), Elephino, Sagecoach (that's my baby), Bobo..the list will probably be pretty long.

Anyone out there who'd like to let us know what your little Rover is called, drop a line and maybe a photo. Should be fun. Editor.

Dear LROA membership,

We at Auto Technica are a service and restoration shop specializing in Alfa, Maserati, and Land-Rover. If you would like, could you put our name in the Aluminum Workhorse for service, parts and restoration of Land-Rovers?

Enclosed also is a check for \$15 for dues renewal..

Ron Peterson, CO

Hi,

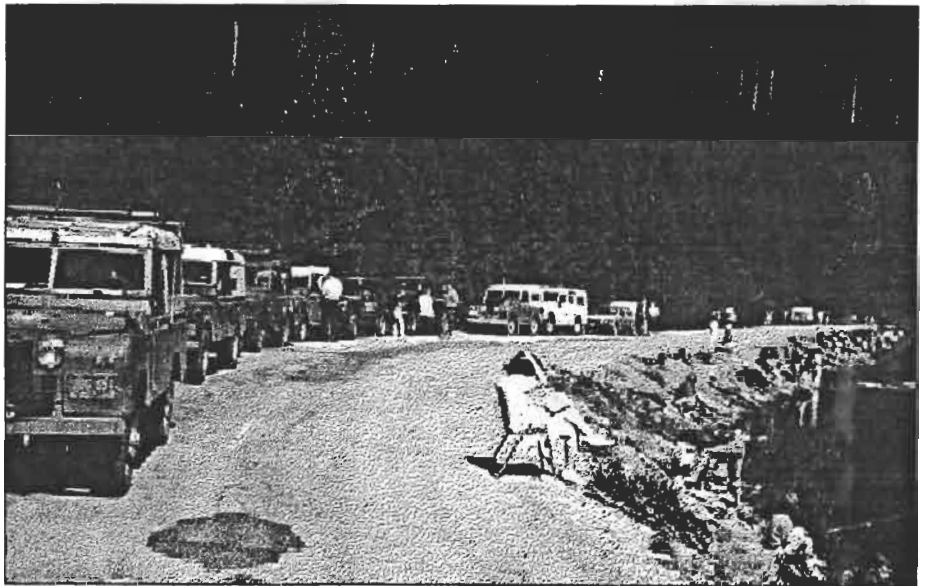
I have had a 1973 88. for about four years now. Haven't ever enjoyed a vehicle so much! I've replaced the frame, installed a plow, rebuilt water pump, brakes, wheel, master, slave cylinders. It's been great looking forward to getting the Aluminum Workhorse.

P.S. I would like to see grill badges made up.

Robert Slater, Slater Upholstery, WI

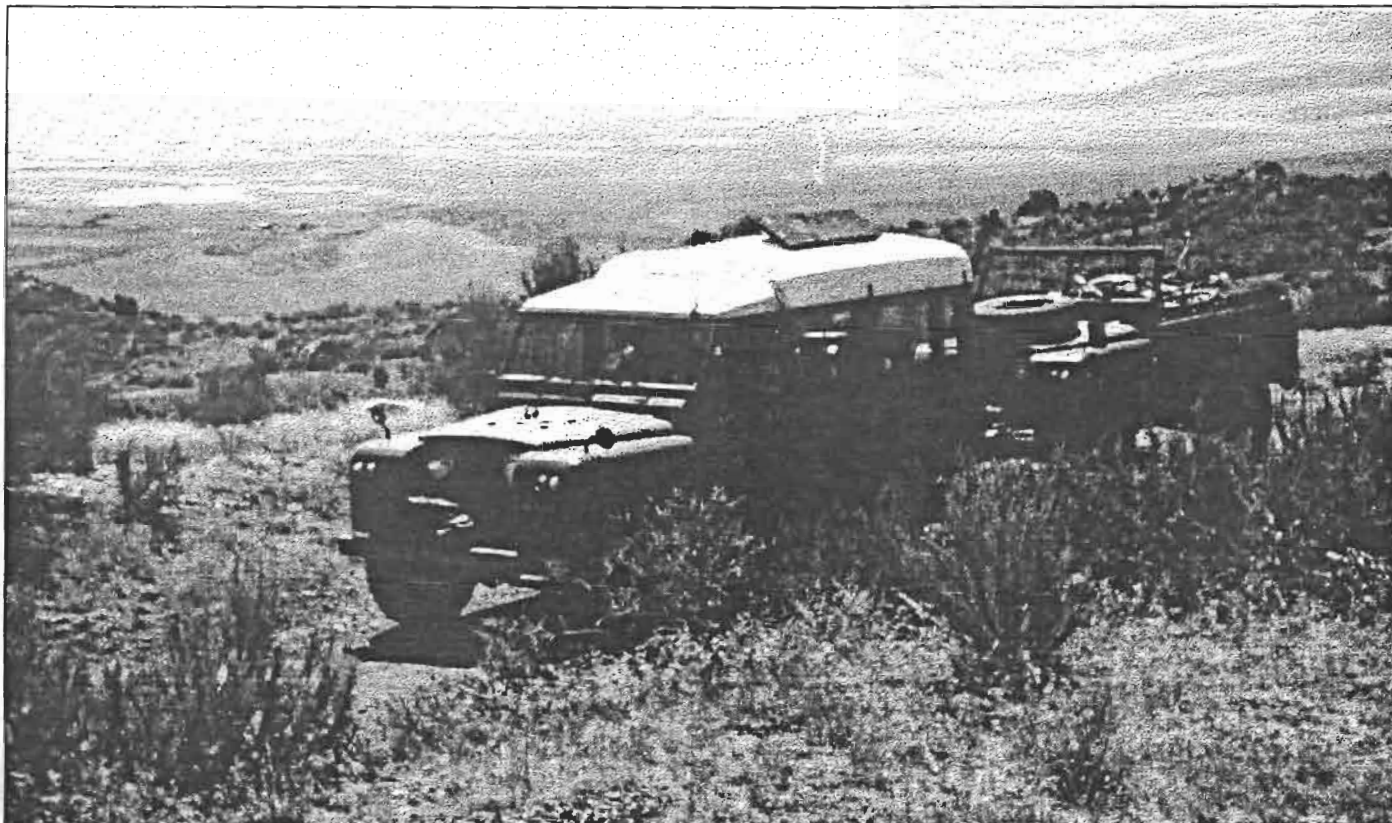


Robert Slater's '73 88, (WI)



Mt. Hood trip in Oregon. Photo...Cliff Johnson

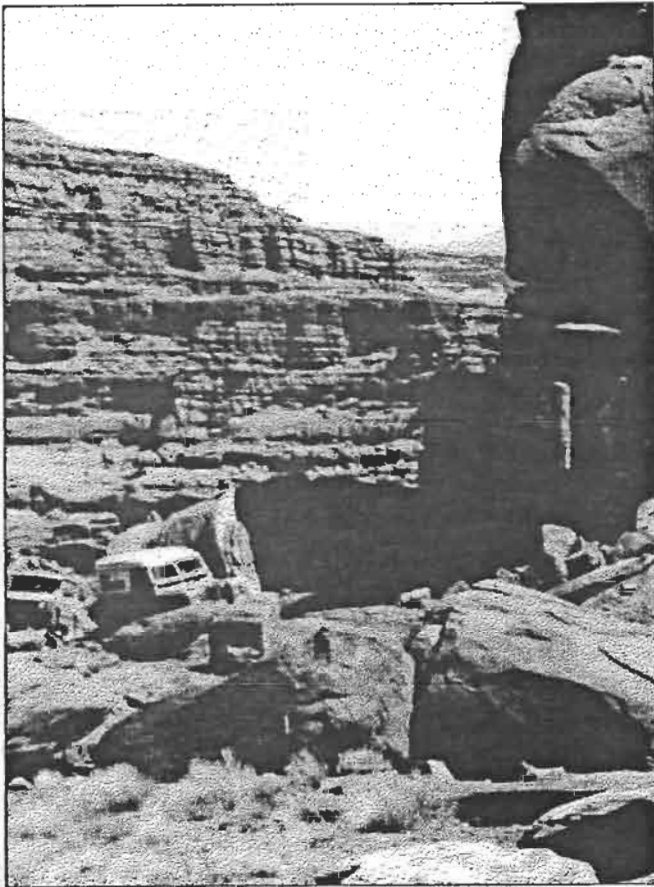
a few more pics from Moab



Doug Shipman (OR) on his way to Moab



Somewhere on the Poison Spider Mesa trail. Original photo...Susan & Niel McCasland



Chicken Corner trail. Photo...Bill Reid (ID)

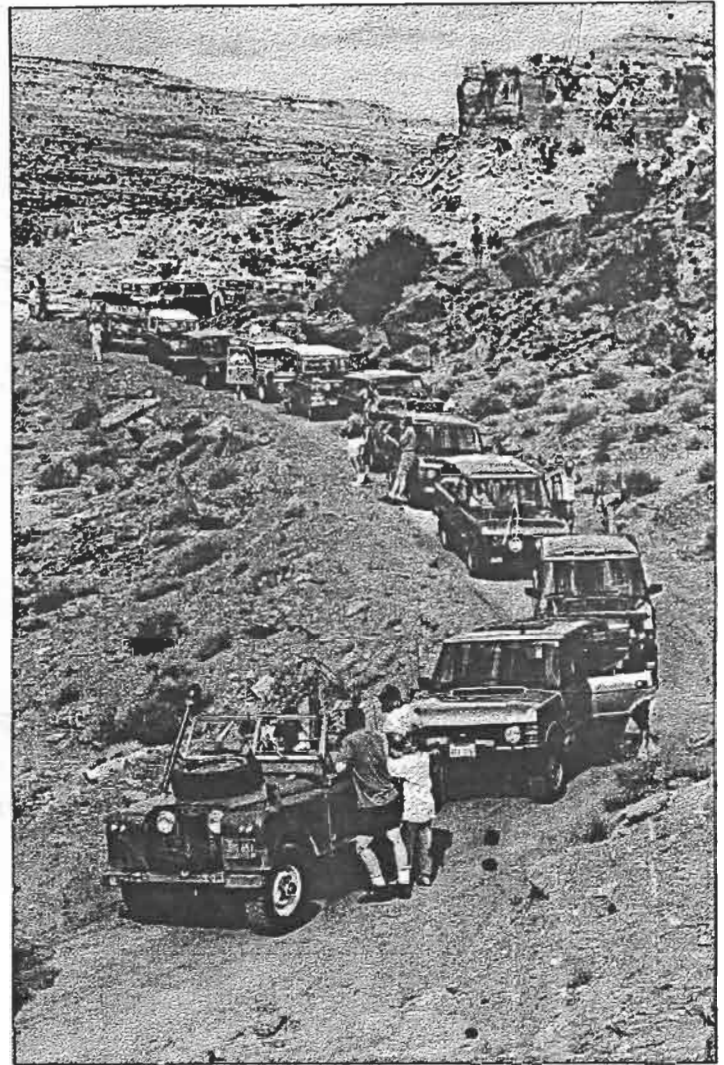


Photo...Craig Hansell (UT)



Chicken Corner trail. Photo...Bill Reid (ID)



Poison Spider Mesa trail. Photo...Susan & Niel

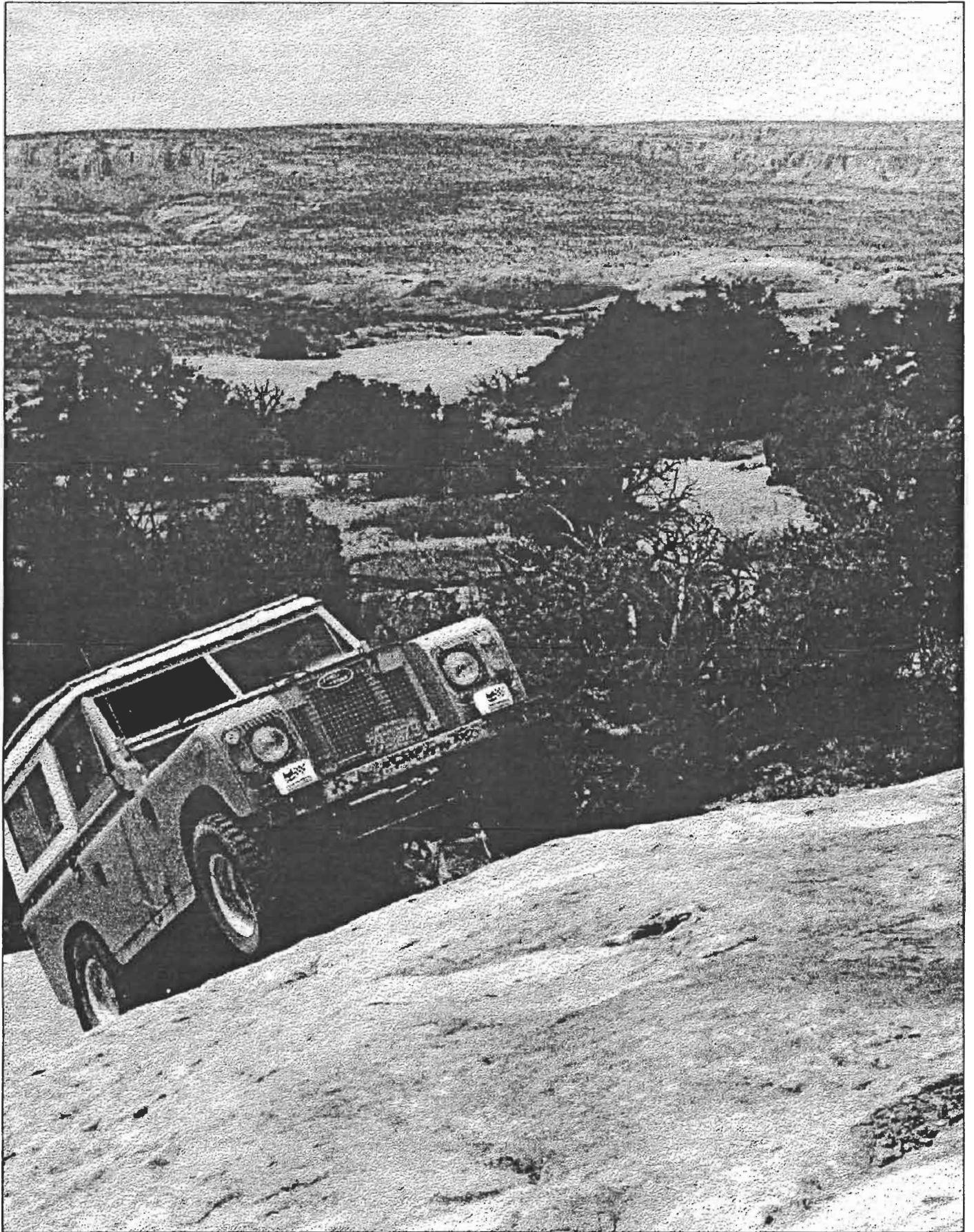
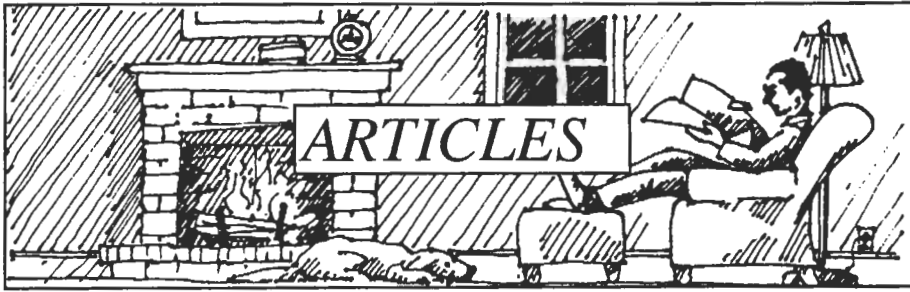


Photo...Craig Hansell (UT)



THE LAND ROVER IN POLITE SUBURBIA

by Cliff Watts #676 CA

We live in San Francisco suburbia, surrounded by Yuppie types and their retired forbearers. As ever, people are what they drive and we express our eccentricity by having a motorized response to their every expression of Yuppiness. In fact we have many more vehicles than any of them. I keep enough running at any one time to create the illusion of a "fleet of classics":

This motley collection can be run for about half the national average family auto cost, which I read recently exceeds the average family food cost!

Our Land Rover was the latest acquisition. As you all know, "acquisition" is so much easier that "divestiture." That's why we have so many vehicles at home right now. You hardly ever see a Land Rover around our area, but ... surprise, surprise ... there was one for sale on a corner just down the street. We looked, drove, and listened to the previous owner's tales of joyous ownership, only to end because it would not pull a two-horse trailer. Just a minute, doesn't the Queen use a Land Rover for that all the time?

But let's not be too hard on the seller; he volunteered and demonstrated how it jumped out of low gears and admitted the hand-brake lever and linkage were completely missing. How was he to know the transmission brake was also an auxiliary reservoir for transmission oil?

There were various items needing attention — how many were due to poor maintenance and how many due to the mid-'70s "restoration" may never be known. When



Cliff Johnson (OR) snapped this off while in Spain last year.

repairing the water pump, the generator was found to be 5 or 10 degrees off its axis. Just starting the engine was the first major hurdle. The starter jammed after a couple of weeks and I found that removing and replacing it would get me a few more starts before it jammed again. The removal and replacement was unpleasant; limited access required 12 wrench moves per full turn of the nut. None of the neighbors spend an hour under their Cherokees every few days!

I had already removed the fuel tank out in front of the house in order to repair 9 or 10 leaks. This was unneighborly enough, now I discovered several teeth missing from the flywheel.

To support my vehicular habit, our garage has doors at the back so any candidate for disassembly can be driven through to a yard area neatly surrounded by trees and fences to disguise the antisocial antics conducted therein. The Landy was too high to get under the garage door, but the previous owner had told us the aluminum top was easily removable by two men. My wife counts as a man any day, so I unbolted everything to find that aluminum may be light, but there is a lot of it and glass is heavy! We ended up dropping the top over the side and had to get help from a neighbor to correct the situation. More embarrassment!

Despite attempts by my wife to disassociate our family from said vehicle, it was moved to the yard, next to a chimney, the brick projection of which would support one end of a lifting beam. Then we could lift the transmission as a unit and push the car out from under it. This was accomplished, but while adjusting the beam for the reinstallation it decided to relocate itself and teeter on top of the windshield. A socket wrench was resting on a fender. After a few rocks back and forth, down came the beam to make a neat socket-wrench-shaped hole in the fender.

Despite previous inexperience, the transmission was repaired, mainly with parts directly imported from England. By putting the flywheel in the freezer and heating the new ring beyond shop manual specs, the two were finally married on the kitchen table with the help of a large hammer and aluminum drift. The transmission was replaced piecemeal (no more bloody beams!) and the roof replaced by three men and one moaning wife.

We then made a trip to England. On arrival at my in-laws house there was a '67 four door in the driveway. They hastily disclaimed it as the property of some misguided friends! It was a rather nice one though, complete with bull bar, roof rack, and ladder — the currently fashionable look over there.

I was allowed a day to search for parts and selected an extremely foggy day to do it. The route was from London gridlock, north to Yorkshire and back to the West Country via the Peak District. Five hundred miles in 15 hours, door to door. The red rear fog lamps are used universally there now and this allows much quicker and safer travel in foggy weather.

The parts suppliers visited were in very isolated areas and obviously rely on mail-order business. Prices are about half what we pay here, but service was mediocre (it can be downright terrible by mail order I have found) and parts for older vehicles not as available as the advertisements may suggest. There is a lot of military surplus stock and if you know how to recognize it, you may find that you have purchased some here but in neat new packages. I wonder if Stateside suppliers know that is what they are getting? Actually, the original (MOD spec) packaging is so good that it must have the longest possible shelf life in that damp climate.

As if to emphasize the jinx our Land Rover has, the parts I really needed were ultimately found just 12 miles from where we were staying and at very reasonable prices.

Back home, I reinstalled the seat box and floor after removing all the silicon sealant used by the "restorer." He must have held stock in Dow Corning! There is no easy way to get it off, yet proper sealant strips are cheap and available at any auto-finishing supplier.

Our SII was rolling again, and on 15-inch wheels, low enough to drive through the garage. The previous owner had told me how convenient it was to use the starting handle when adjusting tappets. He often mentioned doing it himself, but I found the handle was two inches too short to reach the dog.

In time, it comes to all of us in Northern California: a trip to "Scottys." He checked out the brakes and increased my list of things to do quite substantially. I had to replace the drums and rebuild the cylinders. The parts were ordered from England by FAX in

early March. After various phone calls and considerable time, they said the FAX was incomplete. The FAX was re-sent, more time passed, more phone calls made, and they decided they could not read the second one, could I read it out over the phone? They even had to call back when they realized the drums were too heavy to mail. Seven weeks after ordering, the drums and wheel cylinder kits arrived; the rest of the order never did show up!

Each wheel cylinder was dismantled in turn. I did the three bad ones first, but when the "good" one came apart, it contained a 1974 quarter glued to the back of one piston and an equivalent 1970 Mexican coin on the other. This seems to have been a way of compensating for the over-machined drums! If that isn't life threatening, how about a radiator drain plug instead of a bleed nipple? Apparently, the nipple had gotten cross threaded, so some ingenious individual had made the drain cock fit with several turns of PTFE (plumbers) tape.

Well, finally, it has all been fixed. I put on about 2000 miles before....Oh no!.....it's jumping out of second and third gears.....Here we go again!!!!!!!!!!!!!!

Badger

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R.C. Cliff Johnson (OR) sent in some pics of John Craddock's Business in England. Many thanks, John.



SAS Pink Panther



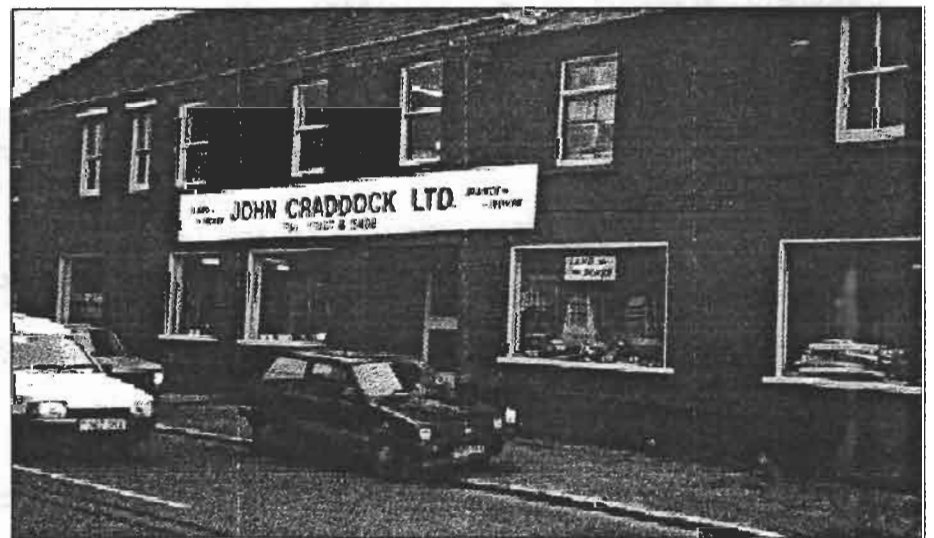
In the work area



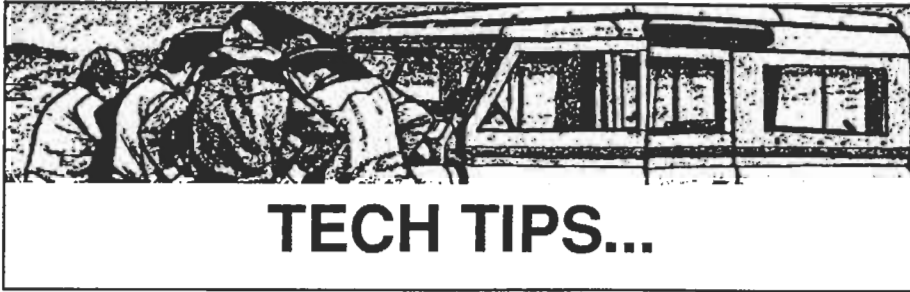
Inside the front of the store



also in the work area



Outside the front of the store



Curing Rover's Wanderlust

by Bill Maloney, NJ

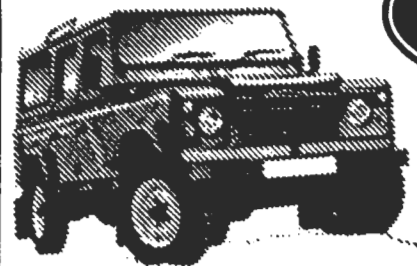
Does your Land Rover seem to want to rove on it's own? Does it continually attempt to wander off road, regardless as to whether or not there is a guard rail in the way? Or does it have a tendency to try to seek out it's British roots, somewhere on the left side of the road? If your Rover exhibits any of the above symptoms, it may be time to give its front end a thorough check.

Step 1. Jack the front wheels securely off the ground. Grasp each wheel top to bottom and side to side and shake each way (if using only two hands, do each step separately). If you find play only top to bottom, you may need to do a swivel ball/bearing/pin replacement. If the play is both top to bottom and side to side it could be tie rod end wear or steering box looseness. If the play is top to bottom, side to side, laterally and longitudinally, wash up, hop on the lounge, have a beer, and put it off until tomorrow.

Step 2...Adjust the wheel bearing pre-load. Remove the hub or locking hub as fitted until the large wheel bearing nut is accessible. Using a screwdriver and a suitable mallet, bend back the locking tab and remove the outer nut and locking tab. Screw the inner nut in (this is a lot easier with a proper hub socket, available through Rovers North for \$18.95—a worthwhile investment) while rotating the wheel to take up the bearing slack (do not over tighten) then back off slightly (1/8 turn should do quite well). Check the rotation of the wheel for smoothness and shake it to check the play. If the wheel does not rotate smoothly or there seems to be play in the bearing only, remove the nut and hub assembly and check the bearing for wear. Replace as necessary. Also check to be sure the brake linings are not adjusted too tightly. Replace the locking tab, tighten the lock nut and bend back the locking tab. Reassemble hub using new gaskets (a thin film of Permatex Ultra Blue on each side of the gasket really keeps the oil in) and refill with gear lube. It's a good idea to do this on the rear wheels as well.

Step 3. Check tie rod ends. Take a large pair of slip-joint pliers and squeeze from the bottom of the joint to the top of the nut. Also have a friend rock the steering wheel back and forth and look at each end. If there is noticeable play when squeezing or rocking, you need to replace the rod ends (they come in pairs). Unbolt and separate the rod assembly in question and take it to the work bench. Loosen the locking clamps and apply penetrating oil liberally. Secure the end in a vice and unscrew the bar using a pipe wrench, staying close to the end (to avoid twisting) but not going beyond the four cuts in the end of the barrel (you may have to coax it back and forth to get it moving). Once you have removed the old ends, clean the inner threads using Gunk

and water and a wire brush, if necessary. Coat the inner threads with an anti-seize compound (Permatex does quite nicely) and the new rod end threads, slide the locking clamps on, and screw the new ends in. Be sure the same number of threads are showing on the new ends as on the old. Replace the rod and tighten the locking clamps. When looking for the replacement ends, keeping your Rover genuine in my opinion is not the best way to go. Get ends with Zurk fittings so that you can grease them once in a while (available through ABP). I suggest stopping at your local auto parts store and replacing the fittings on the two front rod ends with standard-sized grease fittings so that you can use a standard grease gun. Buy a needle adapter so that you can give the rod in the engine compartment a shot from time to time as well. Now is a good time to jack up the front end and check to see that the wheels go from lock to lock. The lock stop is bolted to the swivel ball seal retainer. Have a friend turn the wheel from lock to lock to check this. Lengthen or shorten the steering wheel rods as



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necessary (not the alignment or toe in bar, which connects the two front wheels).

Step 4. Adjust the steering box. Remove the filler plug on top of the box and top off with Castrol HP gear lube. Next, inside of the wheel well remove the steering box cover (if it hasn't rusted away) and clean the adjuster nut and lock nut with Gunk and a wire brush as necessary. Loosen the lock nut (if the box looked empty or the oil dirty, undo the adjuster all the way and let the box drain. Replace and fill) and turn the adjuster in GENTLY, remembering that you are loading a bearing assembly much smaller than that of the wheel. Once you have removed the slack, back off slightly and tighten the lock nut. Replace the box cover or buy a galvanized replacement and coat it with undercoating before installing (use anti-seize on all fasteners — saves a great deal of aggravation the next time).

Step 5. Tighten all leaf spring nuts and bolts (you may want to loosen them first).

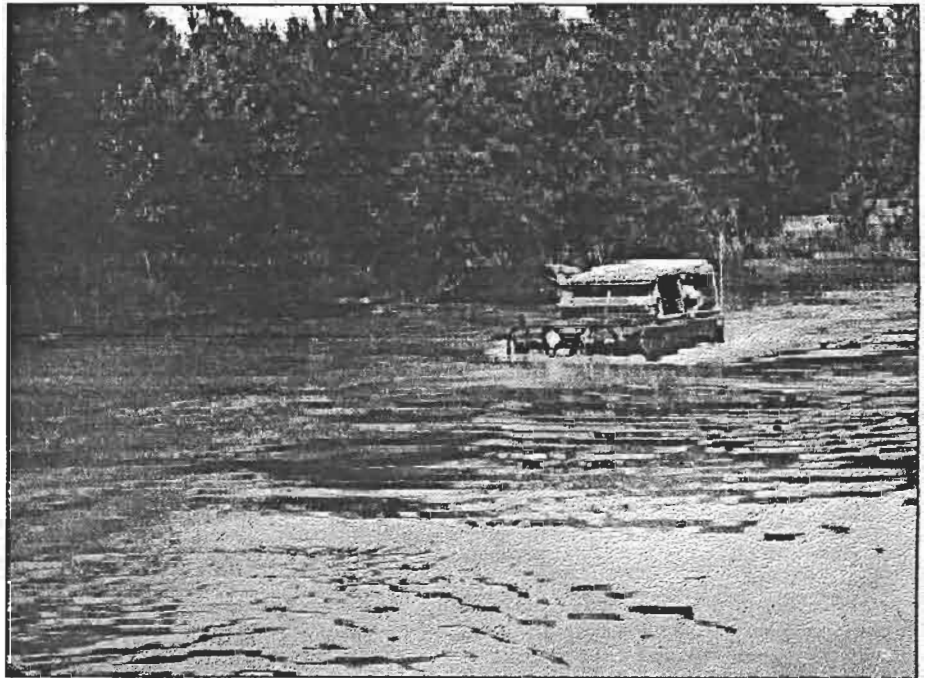
Step 6. Take it for a drive. Chances are, you will be astonished at the change (I certainly was). If you still have a great deal of play, especially in the steering wheel, your steering box probably needs to be rebuilt or replaced. If, after hitting a bump you notice a shimmy in the steering wheel, fracture of the thumbs, or shoulder dislocation, first re-tighten all the tie rod ends. Test drive it again [ed. or if still in a cast, have your friend do it]. If the problem persists, jack up the front end, remove the wheels, and unbolt the toe-in rod and the steering rod end attached to the right wheel. Dig out that fishing scale you have been saving for the Big One (or borrow one) and hook it into the hole on the steering rod where the toe-in rod was bolted. Pull smoothly and check to see that the reading at or near the center is 14 to 16 lbs. If not, undo the four bolts on top of the swivel pin and add or remove shims as necessary to achieve this reading. You may find that by mixing and matching shims from both wheels, you won't have to buy any new shims. Also check the steering relay for looseness. If play is excessive, rebuild or replace the unit. Fill with gear lube by removing the top bolt nearest the raised boss on the side of the top of the box.

Step 7. Lastly, you will want to check the toe in (the only alignment adjustment possible on the Land Rover). Any local

garage can do this at a reasonable cost. Or, for about the same amount of money, you can purchase a drive over gauge, which will work quite satisfactorily, from J. C. Whitney. Once all is set, unbolt and center your steering wheel and you are ready to go Roving or to go on to the next repair project.

*Bill Maloney also sent in a copy of an article (hey Bill — where'd it come from?)

entitled "Beware of the Headhunters, And of Rumormongers." It's about the flourishing in Borneo of modern-day rumors that there are still those who take human heads. The section Bill highlighted reads, "The villagers said they heard that a fleet of Land Rovers had been sent out 'from a neighboring country' to collect hundreds of human heads by the end of February." Would this classify as a "working Rover"?



Steve Johnson (GA) in his 88 at the Dixieland Rovers rally.



Camel Trophy R/R at the July Atlantic British rally, NY. Photo...Dave Offara (NY).

Crankshaft Pulley Removal

by Chuck Willis, Texas Regional Coordinator

Due to a badly leaking front oil seal on my 1965 "88," it was necessary to remove the crankshaft pulley from the front of the engine. The car was on jack stands due to other work in progress, and it was not possible to replace the wheels to allow the use of the weight of the car for purposes of breaking loose the pulley nut. Further, it has been my previous experience that unless the car is somehow restrained, the rotational torque will simply cause the car to move. The hand brake would not hold the drive shaft from turning and the clutch also seemed to lack the stamina needed to hold the crankshaft during the counterclockwise rotation of the strong arm being used to loosen the nut.

I then came up with the following technique, which worked well:

1. I purchased ten or twelve feet of 1/8-inch steel cable. I bought some that was rated at 184 lbs. I'm not sure if that meant yield point, breaking strength, etc, but it seemed about right for what I had in mind.
2. The fan belt had been removed previously, so it was a simple matter to wrap five turns of one end of the steel cable clockwise around the fan-belt pulley. The remaining cable was then extended to the left hand frame member, wrapped once around, and then brought back to the crankshaft pulley.
3. The balance of the cable was then wrapped counterclockwise around the pulley and tied off with a clinch knot.
4. A two foot strong arm was applied to the nut, which, after a slight amount of slack was taken up by the cable in the stretching process, came free with about fifty pounds of force.

This technique can also be used in reverse in order to hold the pulley in place while the nut is tightened.

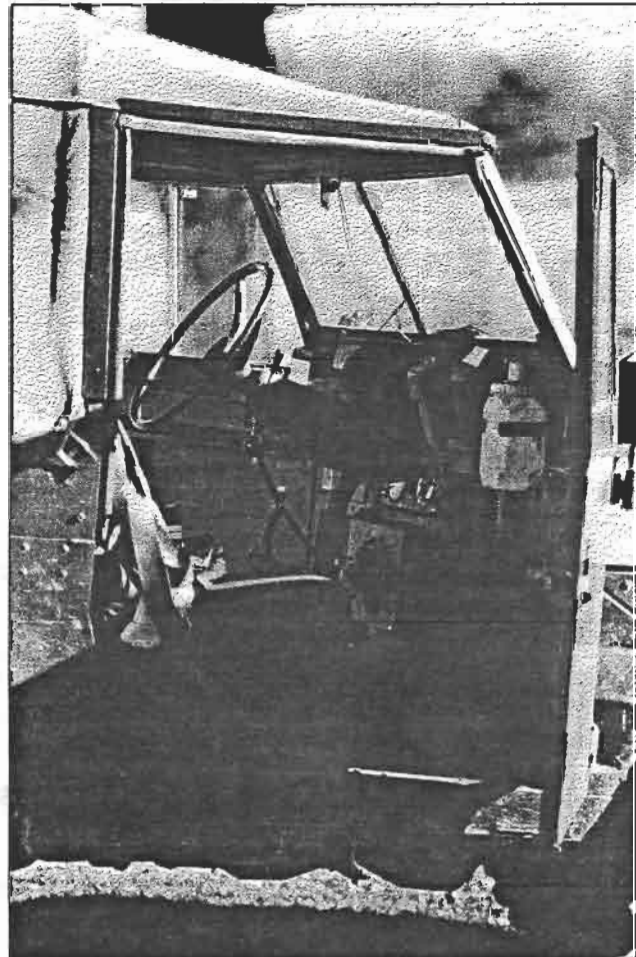
I have heard many other techniques described, including the use of the starter, the insertion of steel blocks or other devices to lock the fly wheel, the insertion of a threaded steel rod into a spark plug hole to stop piston travel, and removing the oil pan to lock crankshaft travel with a wood block. However, I believe the technique described here is the safest, simplest, cheapest, and easiest to utilize, and can be used on the roadside, if necessary.

Quiz Pic

Myles Murphy (ME) sent in this mystery photo.

He says there is enough information here to identify the make and series. There's also another name for this vehicle.

If you have the answer to all three, send it to us and if you are the first one who does, you'll win a (slightly used) series 3 owner's manual.



On the Move

The following profiles are the beginning of a new, informative series on companies and individuals who specialize in the supply of vehicles, new and used parts, general servicing, complete engine and transmission overhauls, and total 'frame-up' restorations of Land Rovers, Range Rovers, and Rover automobiles. If you are involved in any of the above activities, you are invited to submit full details of your entire operation relating to Rovers.

Club members are also asked to send in any info on companies they feel deserve mention. This series will help people find a company with a good reputation throughout the Rover community. The first two companies profiled here are owned by very competent mechanics and long-time Land Rover owners. We talked to some of their recent customers to see if they were satisfied with the work they had done; they were.

The majority of Rover specialists are 100%, given that most of the work they perform is on vehicles at least 20 years old. However, there are a few 'fly by night' guys, so caveat emptor. Get a written and signed commitment on the work to be done. If you feel you have been 'ripped off' let us know.

Details from individuals and companies offering services will be reviewed before printing.

Consult the Rover parts and service page for the services nearest you. If everything's too far away, look in the membership directory for help.

Companies already listed will be reviewed. No preferences will be given and no gifts or gratuities will be accepted...except maybe a late-model, turbo-diesel, ex-Camel-Trophy 110 with reasonable tire life, legal U.S. registration, and ... (just kidding. Honest.)

Send info to

Brad Blevins (editor)
Aluminum Workhorse
1998 Atlantic Street
Concord, CA 94518
or
Myles Murphy (#242)
RR 1, Box 905
Morrill, ME 04952

Arlington Motorcar Service
1712 Wilson Blvd.
Arlington, VA 22209
(703) 276-8022

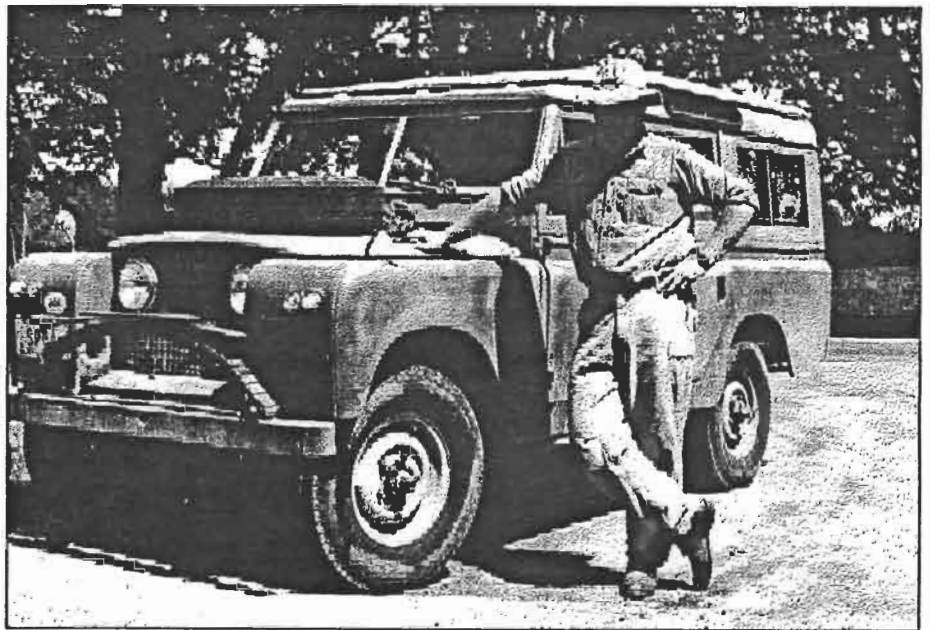
submitted by Myles Murphy, #242, ME

A few issues ago, I informed one and all of a small company with a good record of Land Rover service in the Washington D.C. area (that's right — the Capital). Longtime Land Rover owner, enthusiast, and mechanic Donn Engler has moved to a larger shop. Donn tells me that his list of Land Rover customers is steadily growing. One of his most recent was Theodore Manning #460 of Beaverdam, WI. Theodore drove all the way from WI to DC to have the left windscreen wiper on his 109" Safari tightened up by a 'real' Land Rover mechanic with a regular screwdriver.

Donn's latest acquisition is a '54 Series I 86" hardtop. He intends to restore it to show condition and hopefully he'll do a bit of rallying. (Parts suppliers take note — there is a future, albeit small, in Series I's.)

So, if you feel like driving for two days to have a wiper fixed or you need a complete engine overhaul, get in touch with Donn. (Theodore is capable of fixing his own wipers, actually. He was having a few other things done, too.)

oo oo oo oo oo oo oo oo oo oo oo oo oo oo oo oo oo



Myles Murphy (ME) with '59 series II



Photographer unknown but what a view, eh?!

The Saint George Rover Company
Vaughn's Neck Road
Warren, ME 04864
(207) 273-2370

submitted by Myles Murphy, #242,
ME

Maine is well known as vacationland, at least that's what it says on the state license plate. Call it what you like, around here not that many of us, just a few, call it Roverland. Land Rovers in this part of the country don't cause that much of a stir. Why, only last summer a few friends and six or seven Rovers were parked outside the general store in Searsmont, ME, when along came an old, well-used 88" towing a trailer loaded down with lobster pots. The driver didn't look the slightest bit surprized at the gathering, in fact he didn't even look: no wave, no smile, just drove on through. Dave Otiara #479 of Saratoga Springs, NY couldn't believe it. "How

could a guy in a Land rover drive right by like that — I don't believe it."

"Relax, old boy," says I, "this is Roverland. What d'ya expect."

One of the big names on the local Land Rover scene is Ted Howard. Ted and his new business partner, David Henesy, are the owners of The Saint George Rover Company. The shop is always a hive of activity: a couple of 88s outside waiting to go home, a few more out back awaiting the operating table. Inside, an economy patch-up job in one corner and a total frame-up restoration in the other.

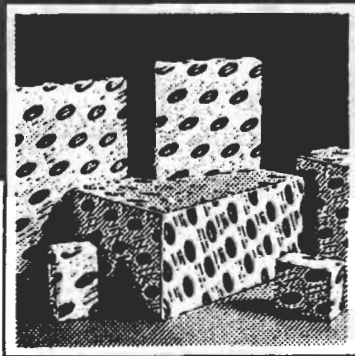
At the time of writing, there was quite a lot going on about the place. Under rebuild were several SWB Land Rovers and a 6-cyl '71 109" station wagon. The pièce de résistance was a 1953 107" pickup. This Series I sat for years atop Hogback Mountain in Montville, ME. It is 99% complete, but Ted would like to

hear from anyone with leads on parts, especially a hoop set for the rear canvas. The 107" will be completely restored and used as a company runabout. (Parts suppliers take note once again: the Series I is back.)

Ted also plays a big part in the annual Down East Land Rover Rally — spreading the word among his many customers and supplying many interesting Land Rovers and Rover automobiles for display.

The St. George Rover Co has 20 year's experience specializing in the repair and restoration of contemporary and vintage Land Rovers, Range Rovers, and Rover automobiles. They have an extensive stock of new and used parts, particularly for Rover cars. There is an extensive machine shop on site. The flat rate for the shop is \$30/hour; project rates are negotiated on a job-by-job basis.

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Ted Crumley & the '67 Rover he received as a high school graduation present.

'61 LAND ROVER 88", trop.
locking hubs, dual tank
shocks, YK cassette. M

LAND ROVER 88", 4 cyl
ellant mechanically-ne
metics, driven daily - \$

MARKET PLACE

'66 LAND ROVER 88", Trop. r
w headers & exhaust sys.
terior redone, recent re
00 or trade for 109"PU.

LAND ROVER 109", 4 cyl
w paste: green paint, in
mechanical condition - 3320

*Marketplace ads are free to members selling or in search of
vehicles or parts for themselves.*

VEHICLES

'74 series III. 8000lb. Warn winch, overdrive, locking hubs(front and rear, for towing), tow bar. New tires, shocks, brakes, mirrors, springs, exhaust, frame& chassis parts. Rebuilt engine. Painted camouflage. Starts and runs great, hot or cold. Asking \$5,500. Dale Foster, OH, 513-392-1220 anytime.

PARTS

Have for sale or trade, 1959 Austin Gypsy parts rig...about 80% complete. Also some Range-Rover parts. Brian Kemsley, 907-262-3241, AK.

2 1/4 Diesel motors or parts. Richard, Lincoln Park, NJ. 201-694-9014

WANTED

Solid frame for 1973 88, series III. Preferably in or near Alaska. Brian Kemsley, 907-262-3241, AK.

'61 88

Has all parts disassembled...two complete engines.
Need help to assemble or will sell for best offer.
Will exchange winter or summer vacation for work done.
Have spare room in house or time share in Fall.
Please call Sherry Mitchell, 303-453-1190
Breckenridge, CO.

Series III Military Lightweight 88 (1/2 ton). 2 1/4 petrol, free wheeling hubs, overdrive, oil cooler, engine heater, twin tanks, weber carb, left hand drive, high lift jack, 5 Cooper radials, military manual, radiator muff. NEW distr, coil, plugs & leads, thermostat, radiator & hoses, light cages, and more.

6 inches narrower than standard Rover and much lighter.

Also Military trailer for the Lightweight. Surge brakes, handbrake, springs, shocks, three support jacks, lights (as Land-Rover), Land-Rover wheels and good tires.

Land-Rover and Trailer are designed for each other...all are in excellent shape. \$10,000. Myles, 207-342-5055, Maine.



Rover Parts and Service

This list is printed on a non-partisan basis for your benefit.
Please help us keep it updated by letting us know of new businesses
and of those who are no longer in business.

* P= new parts, UP= used parts, SV= service/repair, S= rover sales, F= custom fabrication, R= component rebuilder.

A.M.E.I.
P.O. Box 1077
Santa Barbara, CA 93102
805-965-3338

Arlington Motorcar Service
1712 Wilson Blvd
Arlington, VA 22209
703-276-8022 *SV *R

Atlantic British Parts
P.O. Box 109, Roversidge Dr.
Mechanicville, NY 12118
518-664-6169 *P *UP *R

Atlantic British Parts
P.O. Box 1068, Waterloo
Quebec, Canada, JOE-2NO
514-539-2669 *P *UP *R

Atlantic British Parts
P.O. Box 620
Lewiston, CA 96052
916-778-3922 *P *UP *R

Auto Technica
6655 Arapahoe, suite D
Boulder, CO 80303
303-444-0022 *SV *P *UP *

Autocenter 4x4 Specialists
2343 Cranberry Hwy.
West Wareham, MA 02576
508-295-7292 *SV *S R

Badger Interior Coachworks
P.O. Box 1252
Sandwich, MA 02563
508-833-1394 *F

British American Car Service
426 25th St.
Oakland, CA 94612
415-452-4322 *SV

British N. W. Land-Rover Co.
1043 Kaiser Rd., S.W.
Olympia, WA 98502
206-866-2254 *P *UP *SV *S *F *R

British Pacific
101 W. Green St.
Pasadena, CA 91101
213-681-9783 *P *UP *SV *S *F *R

Campart Dist. Inc.
221 41st Ave. N.E.
Calgary, Alberta, Canada T2E 2N4
403-276-2211 *P *UP *SV

Cantab Motors, Ltd.
North Bridge Street (Rt. 1304)
Round Hill, VA 22141
703-554-2211 *P *UP *SV *S

Chris Auto Service Ltd.
12508 125th St.
Edmonton, Alberta, Canada TSL 0T3
403-455-2404 *SV

D.A.P. Enterprises
7 Kendrick Rd.
Wareham, MA 02571
508-291-1311 *SV *S

Dixieland Rovers
Rte.3, Box 358
Tifton, GA 31794
912-386-8498 *SV *F

1st National Garage
4734 Pearl St.
Boulder, CO 30301
303-449-7195 *SV

Green Hill Garage
Green Hill Rd.
Barrington, NH 03825
603-322-8504 SV

Helm Automotive
69 E. Lewelling Blvd.
San Lorenzo, CA 94580
415-278-6887 *SV

The Import Garage
1815 S.E. 50th
Portland, OR 97215
503-235-5951 *SV

Land Rover Enterprises
2104 Jerome Ave.
Yakima, WA 98908
509-453-8580

Morgan's Sports Car West
1570 S. 300 W.
Salt Lake City, UT 84115
801-487-5979 *SV

Paul Safari Components
P.O. Box 39, Queenston St.
Ontario, Canada LOS 110
416-262-4446 *P *UP *F *SV

Rovers North
Box 71
Westford, VT 05494
802-879-0032 *P *UP *F *SV

Rover Parts Unlimited
P.O. Box 790, Hwy 96
Hooper, CA 95546
916-625-4727 *P *UP

Rovers West
731 S. Vine Ave
Tucson, AZ 85719
602-792-0295 *P *UP *R *SV *S

The St. George Rover Company
Vaughn's Neck Rd.
Warren, ME 04864
207-273-2370 *SV *P *UP *R *S

Scotland Yard
3101 E.52nd Ave.
Denver, CO 80210
303-297-9237 *SV *P *UP *R

Scotty's Foreign Car Service
650 Garcia St. #2
Pittsburg, CA 94565
415-432-2221 *P *UP *SV *S *F *R

Ship's Mechanical Services, Inc.
12755 N.E. Whitaker Wy.
Portland, OR 97230
503-252-5566

Tom's Mechanical Emporium
601 Genesee St.
Syracuse, NY 13204
315-475-0271 *SV

Union Jack Rover Specialists
P.O. Box 30318
Tucson, AZ 87551
602-721-0361 *SV

West Coast British
6398 Dougherty Rd. #34
Dublin, CA 94568
415-824-6091 *P *UP *SV

Rocky Mountain Rovers
732 51 Ave, S.W.
Calgary, Alberta, Canada
403-253-7977

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Memberships are \$15 per year (Feb. 1 to Feb. 1). As a member, you are entitled to our quarterly newsletter, THE ALUMINUM WORKHORSE, the membership directory (updated semi-annually), and the opportunity to attend as many of our outings and other events (locally and nationally) as you wish. Tech sessions are held from time to time and cover a wide range of topics. All events are family oriented. We strive to make them safe, fun, and planned well in advance. We don't carry insurance. For one-time national events we are able to get a very limited liability policy but it doesn't cover members or their vehicles, so be sure to carry your own!

APPLICATION FOR MEMBERSHIP

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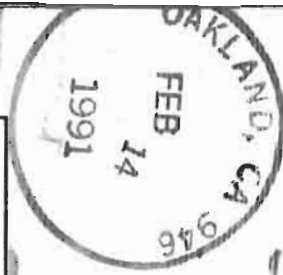
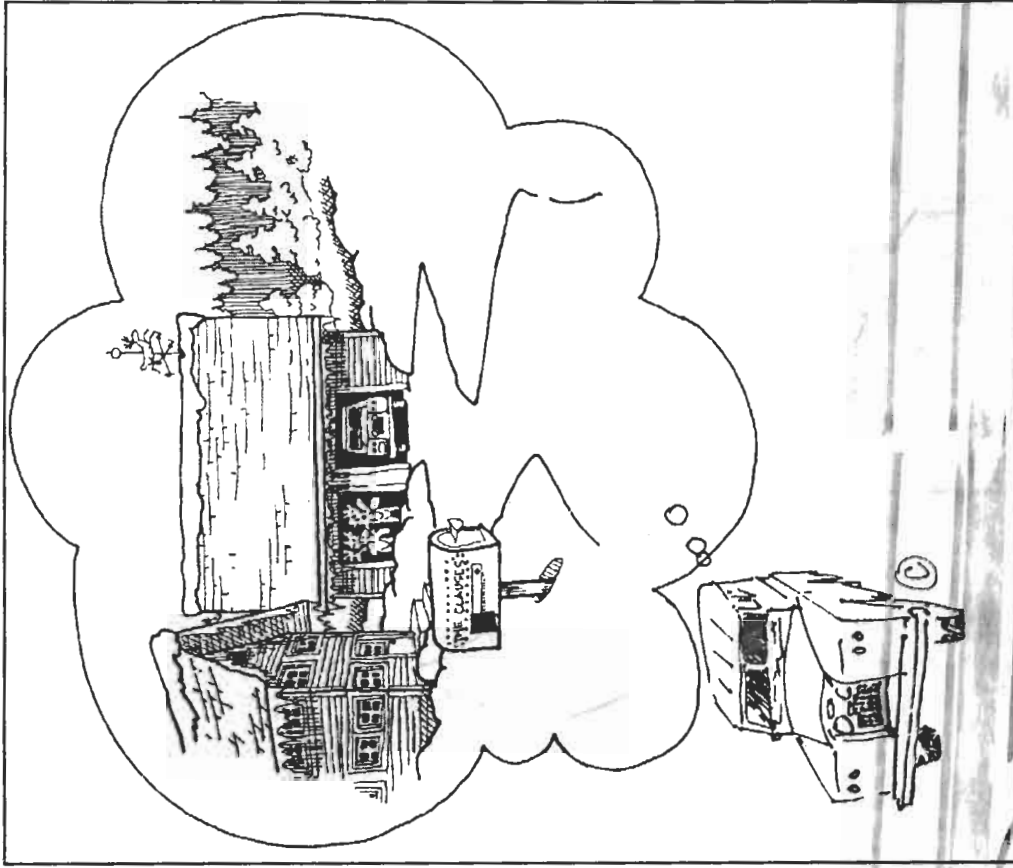
NAME(S) _____
 ADDRESS _____
 CITY/STATE _____
 PHONE (____) _____
 OCCUPATION(S) _____
 ACTIVITIES/INTERESTS _____

ROVER INFORMATION
 YEAR _____ PETROL _____ DIESEL _____
 MODEL _____ LIC # _____
 ORIGINAL _____ MODIFIED _____
 EXTRAS _____

 OTHER _____

Wishful Thinking

by Brad Blevins



LAND ROVER OWNERS' ASSOCIATION, U.S.A.
P.O. BOX 6836
OAKLAND, CA 94603

THE ALUMINUM WORKHORSE

