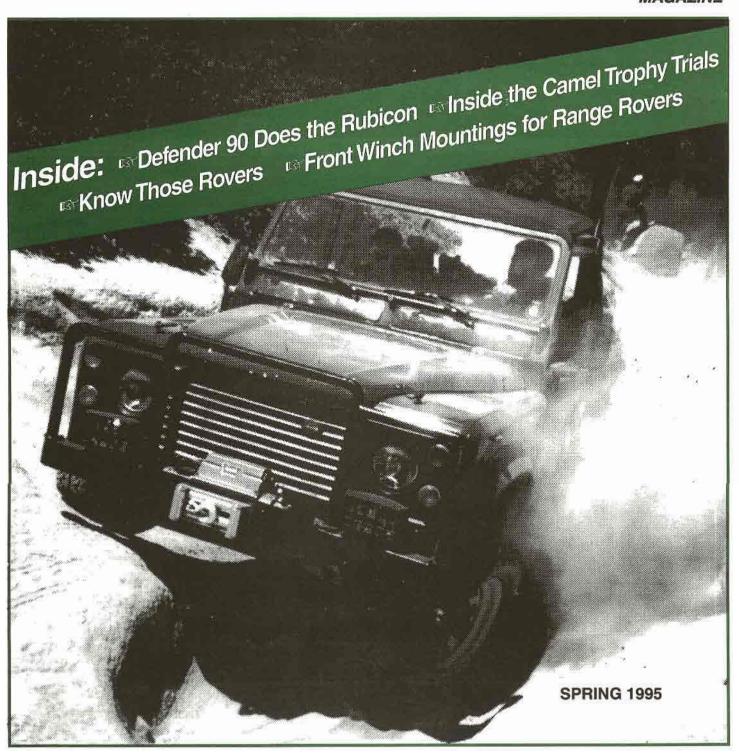
# THE LUMINUM SINGLES IN THE LUMINUM SINGLES IN

MAGAZINE





Box 110 • Rover Ridge Drive • Mechanicville, NY 12118 • 1-800-533-2210

# Rover Specialists Since 1970

Discovery Land Rover Range Rover



**PRICE** As the largest independent supplier of quality Rover parts & accessories in North America, Atlantic British can offer you the lowest prices, guaranteed. Should you find a lower advertised price we'll match it and even give you a gift for your trouble.



QUALITY Every part we sell is guaranteed OEM quality and backed by our exclusive 5-Point Quality Assurance Guarantee. If the part does not perform as expected, return it for a full refund, no questions asked.



SERVICE We maintain a huge inventory in stock and can almost always ship within 24 hours - just call us toll-free! Next-day shipping and Saturday deliveries are also available.

Call for your FREE subscription to the Roverlog!



Toll-Free Order Line: 1-800-533-2210









\* Verifiable written proof required. Does not apply to inferior quality parts, going-out-of-business sales, one-of-a-kind or limited quantities, or when advertised items are not available from other retailers.

Volume XII, Number I, Spring 1995 Copyright 1995 - All Rights Reserved LROA, P.O. Box 872, Concord, CA 94603





Member, Association of Rover Clubs, Ltd., U.K. Corporate (voting) member, Tread Lightly! Inc.

TREAD LIGHTLY

Statements and opinions expressed in THE ALUMINUM WORKHORSE Magazine are not necessarily those of the LROA, NA or it's agents. You are strongly advised to obtain independent verification of all information, data, and methods found in these pages before acting upon them. This is particularly true where safety is concerned. The LROA, NA, it's agents, members, and/or contributors will not accept liability or any form of responsibility or for any accident, loss, or damage resulting either directly or indirectly from errors, omissions, or contradictions in this publication. Nor will the LROA, NA., it's agents, members, and/or contributors accept liability or any form of responsibility for information supplied to the general public. Participation in any event organized or sponsored by LROA, NA or it's agents, or members is at your own risk. It is a condition of entry to, and participation in an LROA event, including static display, that vehicle occupants and/or participants carry insurance and that they agree to absolve and indemnify the LROA, NA, it's agents and/or members against liability, however this should be occasioned. Although the LROA is pleased to draw attention to events that may interest it's membership, the LROA, NA, does not act as a sponsor, or an agent for organizers, of events unless specifically stated as so in this publication. You get the picture.

Deadlines for material: Feb 15, May 15, Aug 15, Nov 15. Items for publication should be original. If copyrighted, please include permission to print. All contributions: news items, event schedules, articles, tech tips, etc. may be hand written or typed.

The most preferable media is a Macintosh formatted, 3-1/ 2" diskette. If using DOS, please save in MS Word, Word Perfect, or as ASCII on 3 1/2" diskette.

We can translate to Mac. The ALUMINUM WORKHORSE is produced using PageMaker v. 5.0 and Microsoft Word, v. 5.0. Permission to reprint any material herein is granted to all other Rover clubs as long as acknowledgment is given to the author and publication.

President: Steve Hill (#1, CA) PO Box 162201, Sacramento, CA 95816-162201 1-916-393-3767

Secretary: Domingo Dias (#115, CA) PO Box 6836, Oakland, CA 94603-6836 Membership/Treasurer: Bob & Sue Bernard (54, CA)

PO Box 1144 Paradise, CA 95967-1144

1-916-877-5656

E-mail: BobandSueB@aol.com Editor: Brad Blevins (#57, CA)

PO box 872, Concord, CA 94522

1-510-687-0955

E-mail: UncleBrad@aol.com Assistant Editors: Lynn Helm (CA), Lynne LeRoy (CA), & Susan McCasland (CO)

Front Cover:

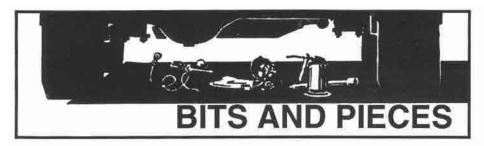
Norman Hendry of Alberta, Canada took this shot of one of the first two Defender 90s to participate in the Rubicon Run sponsored by the Jeepers' Jamboree in California as it negotiated a challenging rock.

# **Contents**

2	
3	
5	
6	
9	
13	
14	
21	
22	
27	
28	
29	
29	
29	
	3 5 6 9 13 14 21 22 27 28 29 29

# Advertising Information:

For advertising rate sheet, please call Brad Blevins at 1-510-687-0955 or write to: LROA, PO Box 872, Concord, CA 94522.



 NEW ROVER DISCUSSION GROUP INTERNET ADDRESS... If you are able to get onto the internet, try addressing:

majordomo@team.net

with the text: subscribe Iro-digest Next thing you know, you'll be receiving Rover-related messages from around the world. Lots of good stuff there.

 NEW LROA, NA NET ADDRESSES... As you know, your editor is at:

UncleBrad@aol.com

Now, you can also e-mail the LROA Membership officers, Bob & Sue Bernard, at: BobandSueB@aol.com

· GOT AN E-MAIL ADDRESS?... If you do, send it to Bob & Sur Bernard. They enjoy hearing from people, and are having fun with thier e-mail.

# Most of Our Members Expire This Spring!

At least, their LROA memberships do. Your Mailing Label has information that you should know in order to keep your membership current. We try to send postcards out to remind everyone about expiration dates, but they are often put aside until too late. What results is a missed issue of the Aluminum Workhorse. Won't you please take a moment to have a look at your Mailing Label? If your membership is going to expire soon, why not drop a check into the mail right away and avoid missing an issue?

· LRW... Land Rover World, a Britishbased magazine for Land Rover enthusiasts, is offering club members a discount on subscriptions. Subscription rates for LROA members are now: US & Canada Airmail, £45.00. These prices are 25% below the regular subscription rate. Call at 081-597-7335 or write:

> LRW Subscription Dept. Hainault Road, Little Heath Romford, Essex RM6 5NP England

• ROVER SHOP IN SANTA FE... We just heard of another shop . These guys have been around awhile, too. The list just keeps on growing!

Layton West Automotive specializes in Land Rovers. They take pride in their work. If you live in that area, they might be just what you've been looking for. The shop number is:

505-474-3116 and the address is: 2875 B Trades West Road Santa Fe, NM 87505

- · EVENT SUPPORT... Atlantic British Parts in NY is no longer going to put on their annual rally which so many Land Rover owners look forward to. They have decided to use the money that they were spending on the rally, to help out with other Land Rover events. This might be in the form of raffle items, giveaway goodies, or who-knowswhat! If your club is having an event this year, give them a call at 1-800-533-2210.
- CAMEL TROPHY BOOK... The Great Adventure is a 200 page coffee table book which, in celebration of the event's 15th anniversary, is filled with photos commemorating the Camel Trophy's history. The cost is \$65. And you can call your order in using your credit card. The number is 41/216910595 or fax to 41/216910600. Or write to:

Camel Trophy SQP S.A. P.O. Box 129, CH - 1025 St. Sulpice, Switzerland

· HEADERS... Clifford Performance has headers for Land Rover engines. The list price is \$288.17 and the price to garages is \$159.34. Got a friend in the business?

Clifford also sells a wide range of performance parts for Chevy in-line engines (among others) in case those of you with conversions are interested in more power and/or economy.

The number there is: 909-734-3310. Or you could just send them a check for \$4 and they will send you their catalogue:

> Clifford Performance 2330 Pomona-Rincon Road Corona CA 91720

· RUMOR... There has been a rumor about some 200 military 110s which may be offered up for sale in the U.S. before long at pretty good prices. Nothing solid but the rumor is persistent. As we have been tracking this, it appears that several "brokers" have looked at it and passed it by for unknown reasons.

To date, we know of only one Defender 110 to be brought into the U.S. and after two years, it still hasn't cleared DOT.

There have been thousands of Land Rovers imported into the U.S. & Canada through sources other than the dealers over the years.

There are several businesses that we know of which will bring one over for you. We believe that most are reputable. But if someone tells you that they can get a late model Land Rover (1974 or newer) into the U.S., please use caution. Get copies of documentation before buying and verify what he is saying from the DOT, EPA and DMV. And even though a military vehicle may have DOT & EPA exemptions, that probably means for military use, not civilian.

The U.S. has some very rigid rules about importing vehicles and each state has it's own, quirky rules. If you get caught with an illegal one, you will, at the very least, loose it.

### LROA WINDOW STICKERS

The sticker is black on clear (frosted) self adhesive and measures 4.25" x 5.5". It is printed in reverse so that you can put it on the inside of your window and it will 'read' from the outside. Please send a check for \$1.50 to:

> LROA PO Box 1144 Paradise, CA 95967

· BACK ISSUES... We have all 3 issues from 1992; Spring, Fall & Winter of '93; and all of '94. They can be purchased for \$5 each. Make check to Emu design. Mail to: LROA, P.O. Box 872, Concord, CA 94522...

### LROA KEY FOBS...

The price is \$4.00. That includes shipping. Send a \$4.00 check (made out to LROA) to:

> David Ducat 1006 Goshen Hill Rd. Lebanon, CT 06249

# Letters

The following letters are the opinions of their authors and not necessarily those of anyone else.

Fellow Land-Rover aficionados,

I have, for several months, enjoyed participating in the Land-Rover Owners discussion list on the Internet. This list is considered invaluable by some of the participants who find the mechanical advice alone saves enough time, money, and hassle to justify the cost of being connected.

But mechanical advice is just a small part of what it's about. The stimulation of being able to discuss your favorite passion with fellow aficionados all over the world cannot be measured.

For those of you wired to the Information Superhighway, there is a Land-Rover newsgroup and forum called the "Land-Rover Owner List" (and which I affectionately term the "Rover-Net"). You can get information on how to join the list by sending an e-mail message to:

majordomo@chunnel.uk.stratus.com

as follows:

info lro-digest

It's that simple. There were about 130 subscribers worldwide, as of the end of July, '94 and must be much larger by now, as new participants have steadily joined. I have enjoyed chatting with folks in from all over the U.S., in Canada, Australia, New Zealand, South Africa, Denmark, Norway, Finland, and of course, the U.K. My most recent correspondent lives in Iceland. He has been telling me about the two distinct flavors of off-roading in Iceland (summer and winter). We have also been discussing our mutual desire to be the first in our respective countries to own Foers Ibex vehicles.



3317 BURTON AVE. BURBANK, CA. 91504 800 554-4133 The Rover-Net is a good place to ask questions and to share opinions about Rovers and roving. Also used to list things for sale, to trade, and wanted.

One of the most active members of the LROnet is LROA member, TeriAnn Wakeman (CA). Some of you may have seen her around, with hay and goats (and of course: "Bear," her giant fuzzy Great Pyrenees dog) in the back of her dark green 109 2-door. TeriAnn also admits to owning two British sportscar leakers as well, an MGB-GT and a Triumph TR-3A. Among her priceless pearls of wisdom is the following (directed to a fellow who was contemplating diving into our wacky midst):

>You need to be seriously strange to own one [Land-Rover] & drive it for any >length of time. If you aren't when you get one, you will ether become that way >or sell it. >>Old Land Rovers are definitely NOT for everyone. The saner crowd gets a new

>4X4

>>But for the seriously strange, there are few things better than puttering about >exploring new & far away places and camping out with your Land Rover. >>Before you purchase one, just understand that it is a commitment of time for >maintenance, \$\$ for parts, you will have to learn more than you think to keep >it going (or have lots of \$\$ and a regular Land Rover doctor that you visit >monthly). They are noisy, primitive, slow, and go through fluids. >>They are not for normal people.

John Hong (also of the Bay Area) replied:

>This is the best summation of the rover experience I have ever read. >TeriAnn, are we allowed to redistribute "The Manifesto" with attribution? >IT made my day.

TeriAnn replied:

>John, Please feel free to use it. An attribution would be nice but since so >many of my statements seem to get into general circulation like my long ago >"Land Rovers are built to withstand the charge of a bull rino and be rebuilt in >the jungle with a screwdriver and a crescent wrench".

I take this as license for us all but we must give TeriAnn her due credit!

I invite all Aluminum Workhorse readers to join the Rover-Net; it's a great way to get to know other Land-Rover nuts whom you would probably not otherwise have a chance to meet.

Regards,

Granville (e-mail to: mcdpw@pacific.pacific.net)

Brad.

In response to Wendell Cotton's commentary on "Land Rovers In the Movies", a couple of excellent ones were missed. Namely:

<u>Cliffhanger</u>. Sly Stallone drives a beautiful 109 which must have been big time noise—reduced, because he is able to calmly talk to the car next to him while driving at a high rate of speed.

The Specialist. Again, Sly Stallone, but just released and I haven't seen it yet. BUT the film company did buy three 109s from the Land Rover Club of Florida and leased a fourth from a member. The three were destroyed (and should have been, given their conditions) and the fourth was used as the film road car.

Elephant Gun (UK title: Nor the Moon by Night). 1958 starring Patrick McGeehan as a game warden in Kenya. No video release unfortunately.

And finally the ultimate film to own...

Anna Clark Goes Australian. Released by Playboy. Excellent coverage of a topless 88 and topless/bottomless Anna Clark going cross—country and camping out via Land Rover.

Regards, Thomas J. LaManna Land Rover Club of Florida

Hello,

I have a 1983 convertible range rover that I bought in June. I was just looking around for someone that may know a little more about it than I do. It has the 3.5 liter engine and a 4-speed manual. I think it was converted by something Smith company in Britain but am not sure. Any help would be most welcome.

Thank you Jon Francis

E-mail: Gfrancis@utxvms.cc.utexas.edu

Dear Brad

We've started an official club, as you probably know:

The Flatland Rover Society

16009 W. 82 Place

Lenexia, KS 66219

The President is Steve Paustian.

Also, I'm hoping to organize a 30 day expedition in East Africa some time in 1997 with anyone interested. The idea is strictly pleasure but requires physical fitness for the adventure which includes Land Rovering and camping without luxury. I have some friends in Kenya who can help me guide for the adventure.

As a naturalist, I feel it is important to spend more time in an area within 50-100 miles if you want to learn something of your natural environment. If you or anyone is interested, please write to me.

Vincent von Frese

4722 Evenston Ave.

Kansas City, MO 64133

Howdy.

I'm not much of a "Letter to the Editor" writer but the time has come to set some of the newer(?) Land Rover owners straight on "What's in a name".

For the last several years I've noticed a lot of people (presumably newer Land Rover owners who have forsaken their American or Japanese trucks) are referring to their Land Rovers as "trucks".

Referring to a Land Rover as a "truck" is at the very least sacrilegious; at the worst, blasphemous. Chevrolet, Ford, Datsun, Toyota, International, and others make "trucks". The Rover Motor Company makes "Land Rovers".

"Landy" was in vogue a few years back, and that was bad enough. If you must call your Land Rover something other than "Land Rover", please give it a name that reflects your appreciation of having a unique and legendary vehicle.

My 1960 109 Land Rover pickup was christened "The Frog" because it was several shades of peeling green paint when I hauled it out of a potato farmer's boneyard. I have since come to realize that, in reality, it is named Frog because it croaks often. Our 1967 Land Rover Station Wagon is named Mort after an elusive rugged woodsman in a Louis L'Amour novel.

Enough said.

George Babits, Jr., ID

Dear AW.

I thought you might be interested in my Land Rover experiences on a recent trip to Panama. I drove to the north country coffee plantations there (in a rented vehicle, not my Land Rover) along the Costa Rican border, near the extinct mountain volcano, Baru, and through the beautiful cities of Boquete, Cerro Punta, Volcan, and Rio Sereno. There are some wonderful mountain roads connecting these towns along the northern frontier of Panama.

Much to my delight, I saw many Land Rover Series IIAs, Series IIIs, and Santanas. The two photos enclosed are of myself and two locals. These men told me that all parts for Land Rovers used in Panama are ordered and imported from Costa Rica.

Each day of the trip, i counted six or seven LR vehicles and talked to as many happy owners as I could. Spanish is essential here, so my limited command of it came in handy. When I told the people I encountered about my 1964 Series IIA 109, immediate camaraderie followed. What a great way to make new friends!

I also want to commend the president of our local Land Rover Owners' club (Peter Donnely) for the way he extends himself to help his membership with "driveway" mechanical problems. I have had occasion to ask his advice several times and he is always generous and cheerful in giving his assistance. It makes my memberships (in the local and national associations) very valuable to me. I consider your magazine to be an enjoyable bonus as well.

Keep up the good work! Sincerely, Alan Gordon, IL





Alan Gordon (IL) brought these photos back from a recent trip to Panama.

# **Events Calendar**

# **BAY STATE (MA)**

 May: 3rd annual Pilgrimage Tour to the U.K. This should be the best trip yet. The ARC International Rally, a Factory Tour, the Heritage Rover Museum, and a planned Off-Road Guided Tour in Land Rovers

 Sept. 29- Oct. 1: Fall heritage IV Write to:

> BSROA PO Box 342 North Scituate, MA 02060

## **BLUE RIDGE AREA**

- May 5-7: BRLRC Spring Meet, Parkersburg, WV. Planning to cover territory not covered in Nov. Contact Dave Ritchie at 304-428-5035.
- June 23-25; BRLRC Back to Basics II.
   George Washington National Forest, west of Harrisonburg, VA. Contact David Schworm at 410-263-7457.
- Fall '95: BRLRC Fall Meet. Staunton,
   VA. Hosts: Beau & Resa Beasley.

### **CALIFORNIA**

 July 29 and July 30: HIGH LAKES TRIP: Camp where the Cascades end and the Sierras begin, above Paradise in Northern California. The High Lakes region is a beautiful area, with several lakes for fishing, great vistas and wildlife for nature lovers and photography buffs, plus some fantastic off roading for short and long wheel base vehicles. LRO's will find the trails truly enjoyable, and as easy or hard as they would like.

Contact Bob and Sue Bernard, 916-877-5656 for more information. Email address: bobandsueb@aol.com.

Sept.: All British Car meet, Palo Alto.
 This is Northern California's Rover owners' day to hang out together. Over 40 Rovers expected. Firm date TBA.

### **COLORADO**

- April 11: Solihull Society General meeting, 7:30pm at Pint's Pub, 221 W. 13th Ave. in downtown Denver
- August 15-20: The U.S. National Rally, Brekenridge, CO.

The Solihull Society joins America's Genuine Parts suppliers, Rovers North and British Pacific in celebrating the 25th anniversary of the Range Rover in Brekenridge, Colorado.

Experience the splendor of the Colorado Rockies, incomparable trail riding, social events, driving tests, games, raffle, and banquet.

For more information, write:

Solihull Society PO Box 916 Monument, CO 80132 or call:

Peter Taylor—800-332-6647 Gregory Chernushin—800-383-5886

### **GEORGIA**

- · May 13: Atlanta British Motorcar Day
- 3rd Tuesday of each month N. Georgia Land Rover owners meet at the Georgia Pig, 7:00pm.

Contact Jack Walter, 404-641-0147

### MAINE

 July 1 & 2. DownEast VI. Mid Coast Maine. The largest, longest running, most laid back rally in North America, and it's all free.

Schedule Update:

Sat: Off-Road Day. Land Rover Dealers, Latest Vehicles; New Range Rover, Range Rover Classic, Discovery, Defender 90. Land Rover Trials Course, Balancing on Land Rover See-Saw, Trailer Reversing, Hand Cranking, High-Lift Jack Test (vehicle provided for these). Winching Demo, Rovers North Off-Road. BBQ at \$5 a head plus pot luck (so bring something). Evening Dinner at Whales Tooth Pub, Lincolnville Beach.

Sun: Owls Head Transportation Museum 9am – 4:30pm. This year should see in excess of 100 participating vehicles, Dealers, Clubs, Rovers North Inc., D.A.P. Enterprises, others, Food, Museum, Airshow & More! Whales Tooth Pub for dinner in the evening.

Final agenda available in April. Send SASE (USA only) for details and local accommodations listing. If you are coming, let us know what you are up to so that we can better accommodate you.

Call 207-789-5303 or write:

Myles Murphy RR2 Box 23 Lincolnville, ME 04849

### NORTH CENTRAL

 Sept. 10: British Car Show, Oakton Community College - Des Plaines (Chicago)
 for additional information please call Peter Donnely at 708 831-2208.

### **OTTAWA**

- · May: Engine Tune-up.
- June 24-25: 12th Annual OVLR Birthday Party. Swimming, fishing, camping.
- July 30: Annual breakfast in Victoria Island in the middle of the Ottawa River off of Parliament Hill. For those local to Fourfold, the cost is \$3.00 for breakfast and the chance to show off your favorite aluminium pet. Last year saw fifteen Land Rovers appear.
- August 20/21: Calabogie power cut/ Flower Station Road off-road event. An over night adventure, this venture is classified as a light to medium off-road down a Hydro Ontario hydrcut and fire road west of Ottawa. By describing the event as medium off-road, the event does not include any heavy winching (if any serious winching at all, there is a gravel hydro road 100 meters off the Land Rover trail) and a route that will not damage your vehicle, though giving it plenty of opportunity to show off axle articulation. (For those into axle articulation, there is a side section off the main trail were an OVLR 101 Forward Control seriously embarrassed an American vehicle a couple of years ago below the hydro dam.)s.
- September: Silver Lake, an overnight camping event with an off road course through Provincial lands with a static base similar to the OVLR Birthday Party, as opposed to the Calabogie power cut run which does not feature a static camping site on Saturday evening.
- The second September event is the Stowe British Invasion.

OVLR, 1016 Normandy Crescent, Ottawa, Ontario, Canada K2C 0L4

### PACIFIC NORTHWEST

- Feb 25: Annual meeting, Denny's in Centralia
- May: Northwest Challenge, British Columbia, Canada.

Contact Doug at 503-661-5123

# **News and Info**

# **US Camel Trophy Finalists Chosen**

Roy Caldwell (MT)



### **DAPHNE GREENE**

Daphne is 33 and makes her home in Ross California-home base for her own outdoor/adventure consulting firm. Currently she is planning a nation wide ski event to raise money for AIDS research. The fund raiser will be a series of ski events at major ski areas and will include snowboarding, down hill and telemark skiing. Daphne stays in shape with a weekly program of running twenty to forty miles, two miles of swimming and participation in a local coed soccer league. Into this busy schedule she squeezes practice rock climbs and pack trips to keep skills up for her leadership role in the outdoor adventure trips she leads.

Just prior to the U.S. Camel Trophy Team Trials, Daphne had just returned from an expedition to Mount Kiliamanjaro in Africa. For Daphne being a Camel Team Member is, " A chance to represent your country and the pride that comes from helping to make the best possible team for the United States. " Her most important objective at the trial was to, "Not embarrass myself, the team or anyone else." Daphne is a prime example of the quality people that are part of the Camel Adventure.



THOMAS DAVENPORT

Tom is from Burlington Vermont and is finishing his senior year for a degree in mechanical engineering. At 22, Tom has worked hard at diversifying his personal skills and abilities by taking on as many different jobs as is possible. He has worked as a carpenter, ski instructor, chef and a surveyor. In addition he has broadened his athletic skills with competition in mountain biking, soccer and alpine ski racing. As Tom put it, "I believe in hard work and never giving up. " To that end an ultimate goal for Tom is to be a competition rally driver. He has traveled in Europe and the Pacific Rim including participating in a Camel Trophy style trek in Australia.

Tom firmly believes the Camel Trophy is like life, "You face difficult situations that challenge you to do your best.



JONAH HOUSTON

Jonah, from Monterey California, is a marathon runner with the Boston, Big Sur, Vermont City marathons behind him. He has also competed in the Green Mountain and American River 50 mile races. At 28, he is currently employed at the Russell Racing School of Monterey as team manager. The job requires Jonah to supervise mechanics and apprentices in maintaining the school's fleet of 40 race cars. He has also raced cars and motorcycles in competition. With a degree in Philosophy from the University of Vermont, Jonah has worked as a sports writer and now finds himself deeply involved with motor sports.

During the team trial a former Camel Trophy team member commented that Jonah was an animal. He was referring to Jonah's high level of energy and enthusiasm even after 30 some hours of grinding activity. When questioned about the experience, Jonah replied, "This is an adventure of a lifetime that brings together different individual activities and demands perseverance at different levels."



JIM SWETT

Jim is married and lives in Lebanon Connecticut. Jim has worked as a surveyor and currently is a crew foreman supervising construction of steel buildings and custom walk-in freezer installations. His job takes him across the country and in between jobs Jim has designed and built his own home. Jim is a recreational runner and mountain bikes when time permits. Local competition with paintball, volleyball and softball leagues keeps up Jim's desire for team sport activities. Jim is an avid off-roader and has mechanical experience from rebuilding and repairing his various four-wheel drive vehicles. Most of his outdoor skills come from off-road camping trips and weekend excursions to the hills with his family. During the trial Jim felt the camaraderie very strongly and realized that sometime you just have to slow down, get a plan and

When Jim was asked what he thought of the trial he replied," It was harder than building my house all by myself. "At age 30, Jim will get a chance to see how hard it can get when he and the U.S. Team head to Turkey for the international trials.

# Land Rover Defender 90 Hardtop Spotted

A Special Edition version of the Defender 90 that promises to be one of the rarer ones in years to come was spotted at the North Point Land Rover Center in Roswell, Georgia on Thanksgiving weekend, 1994. This is a Defender 90 with an aluminum hardtop with sliding side windows and two piece tailgate. The Land Rover has the external front safari cage and the internal crossbar that runs across the floor behind the seats of the soft top version but does not have any of the rear roll hoops that used in the standard Defenders. The horizontal bars running back from the windshield hoop just tie into the hardtop forward of the alpine windows. The lower tail gate swings to the right as the soft top version does and the upper lift gate is supported by two gas struts. There is no latch on the upper lift gate as it is held in place by the lower tail gate when it is closed. The forward section of the top had a headliner but the section over the rear compartment was just painted aluminum. The dealers point out that this version of the top is nonremovable (for liability reasons I think as it will unbolt as does any hard top just lots of little bolts). It looks like the main hoop of a soft top version could then be installed to support the windshield hoop but the top cannot be used with the standard safari cage in place. This is a completely different version hardtop from the soon to be introduced fiberglass hardtop which will apparently be sectional to allow easy removal and to fit around the standard safari cage.

The dealer said that only 43 of these hardtops were built for the U.S. market and that Land Rover of North America was going to keep three of them in house. This means that there are only 40 vehicles available that will be distributed to the 88 dealers nationwide. All of the Special Edition hardtops are green with a white roof panel and the cost of the hardtop adds about \$2500 to the cost of the base open car. The one I saw had air conditioning, side steps, a bull bar, radio, alloy wheels and a spare tire cover. The sales staff said that this version is very much quieter on the road than the soft top version is and that they all enjoyed driving it. I know I would certainly like to make room in my driveway for it.

Jack Walter

# Good News/ Bad news

Bad news first. British Rovers, the first parts supplier to give us an 800 number, is no more. Now the good news. British Rovers owner, Bruce McEneny has purchased Massachusetts-based D.A.P. Enterprises.

Bruce, a genuine, honest-as-the-day-is-long Land Rover enthusiast will move DAP, lock, stock and barrel, to a new location in southeastern Vermont.

The British Rovers 800 number is no more due in part to the name change and the fact that many costly weekend calls were from frustrated do-it-yourselfers in dire need of technical assistance. Many of them seem to have bought their parts from other sources.

So, British Rovers becomes D.A.P., and with the change comes a greater ability to serve the Land Rover enthusiast.

The number at the Springfield, Vermont location is 802-885-6660.

# Original Minerva Series Ones Available

The Belgian company, Minerva, built the series I 80 from 1952 to 1954. The vehicles are unique in several ways. One is that they are still in military service.

They are, in every sense of the word, identical to the Solihull with the exception of the allsteel construction, sloped wings, and unique front grill.

150 Minervas are being sold. They are ex-military with Rover 2 liter engines, have less than 1,000 miles on the clocks, have spent 30 or more years in storage, and are Left-hand-drive.

The vehicles come in 3 styles:

- · General Service. Standard body style with soft top.
- Casualty Evacuation Vehicle (in best condition due to lack of use). Regular style hardtop with misc. hardware attached to accommodate stretchers & such.
  - · Combat. Pink Panther-style body. No top, tire on front grill, no tailgate.

Unit cost is \$2,500 with about another \$1,000 shipping fee to the East Coast of the U.S.

The vehicles have been examined and given high marks for condition by a well known Land Rover expert.

Myles Murphy will act as agent for the vehicle sales without charging commission. The number there is 207-789-5303.

MJN

# New Land Rover Club in the Kansas City Area

Yet another group of Land Rover enthusiasts have started a club. They are calling themselves the Flatland Rover Society,

The founders of the club had their first meeting on Feb. 4, 1995 and had much to discuss. Among them was the topic of Club Logo. Apparently this group has several artists who will be putting sketches together for review at a future meeting.

The club's newsletter, The Oil Rag will, of course announce upcoming events and report on past events and club business. Businesses who want to expose themselves to the Rover community in the area, as well as support the club, are welcome to place ads at a reasonable rate. As an example, the cost of a 1/4 page ad would be \$15 for 2 issues.

Veteran 4-wheeler, James Merriam has been named "Rally Coordinator" for the club. His job is to arrange club activities which will be "family oriented" and come under the name "Quest for Adventure".

The first official rally will be held April 28, 29, & 30. Technical sessions will be organized in the future as well.

Dues are \$20 per year (Jan to Jan). Owners of any Land Rover vehicles are welcome to join. For more information you can write or call the club president, Steve Paustian:

FRS

16007 W. 82nd Place Lenexa, Kansas 66219 Phone: 913-541-0575

# Defender 90 for 4-Wheeling America



Bill Burke's 4-Wheeling America (classes, field trips, and adventure guide) in Denver, Colorado is the proud owner of a 1994 Land Rover Defender 90.

The vehicle's 3.9 V-8 engine is stock (so far).

But, the 90 sports ARB Air Lockers, front & rear, a Superwinch S-9 9,000lb winch mounted in an ARB bumper that supports a 60" Hi-Lift jack. KC Hilites Daylighters, driving lights and rear-mounted flood lights light up the night. The Old Man Emu (ARB) coil springs and Nitro=Charger shocks and steering stabilizer raised the 90 1 1/2 inches higher and added a couple more inches to the already substantial wheel travel, allowing the 32"Mud T/As to stick to the trail. The juice from the 160amp Premier Power Welder alternator keeps the dual Optima batteries charged. To keep from getting lost, the Trimble Scout GPS is mounted on the dash next to the Cobra 40 channel CB. Inside, creature comforts remain the same except for the recovered Series II back seats that can fold down to carry passengers, if needed. The Pull-Pal, Max tool, Sure Claw wheel chocks, Superwinch H/D winch accessory kit & tools fit with plenty of room to spare for Bill's Airedale, Harley, and the outfitting supplies needed to make his clients comfy and satisfied while on the trail.

# The Cadillac of Range Rovers on its Way

Watching consumer preference trends, Cadillac has seen the future, and it's not a Fleetwood. The company wants to follow the lead of Mercedes Benz and Ford's Lincoln and, like those two upscale competitors, produce a deluxe sport-utility vehicle for affluent baby boomers. A Cadillac sport-utility vehicle likely would include real wood on the dashboard, a satellite-based navigational system, and appliances to refrigerate and heat food. (Wall Street Journal 1/17/95 B1)

# U.S. Badger Coach Works, Gets LRNA Contract

The soft tops for your new Defender 90 will likely have some changes from earlier soft tops. Chris Laws, owner of Badger Coach Works, has been approached by and is now consulting for LRNA in regard to the design of the tops.

Chris has been installing Land Rover interiors in the U.S. for many years now, and this is a great honor, as well as breakthrough. Badger is now the official East Coast Land Rover interior repair and refurbishing shop

# Turner Engines at Rovers North

Rovers North, Inc. recently took delivery of Turner Engineering (UK) high performance 2.25 petrol engines with 30% more power than stock Land Rover engines. Turner Engineering specializes in re-manufactured Land Rover 2.25 & 2.5 four cylinder petrol and diesel engines and cylinder heads. The Rover V-8 has recently been added to the list. In addition to their remanufacturing work, they are in demand as consultants to none other than Land Rover Ltd. itself.

Richard and Frieda Turner were expected to visit Rovers North sometime in April. Their visit may result in the Vermont company becoming the sole distributor for the engines in North America.

MJM

# **Italian Job**

Land Rove Limited recently announced it has secured a large order for its Defender 90 Hardtop models from the Italian Carabinieri (police), Apparently, 840 vehicles worth an estimated \$18.3 million have been ordered for delivery at 45 vehicles per month commencing March 1995. The Defender 90, powered by the company's 111bhp, 2.25liter turbointercooled direct injection "300Tdi" diesel and equipped with the latest R380 manual transmission, has been tailormade to the Carabinieri's exacting specifications and will be used for routine police work. A further \$6.1 million order for Defenders has been received from the Italian state forestry organization, national fire brigade, and the customs department. These latest orders follow earlier Italian contracts to supply Land Rover vehicles to national oil, power and television companies.

The huge increase in worldwide demand for the versatile Defender range has meant the introduction of the first-ever night shift on the production line at Solihull in the west Midlands where the machines are manufactured. Weekly output of Defenders now exceeds 500 units. Other lines are already working full steam ahead churning out the new Range Rover, Range Rover "Classic" and Discovery for the world's markets.

Mike Hallett (UK)

# **Club Reports**

This section will introduce you to and keep you abreast of what's going on with Land Rover clubs throughout North America.

# Southern Appalachian Land Rover meet in North Georgia

### **Jack Walter**

On Saturday, September 24, ten Land Rover vehicles and a couple of J\*\*ps assembled at a campground on the outskirts of Dawsonville, Georgia for the first annual Southern Appalachian Land Rover Rally and campout. LROA member David Porter organized the event and selected a route through the Rich Mountain area of the Chattahoochee National Forest for the entertainment and enjoyment of the participants. David and his friends and family put a lot of work into this event and I want to thank them on behalf of all of the Land Rover owners and enthusiasts that attended. This is sure to become a highlight of the fall season if organizing this first event didn't burn poor David out. He ar-



ranged camping privileges, had T-shirts printed, mapped out a route, made reservations at a local barbecue joint and notified the local Forest Rangers of our plans - an excellent job for a first effort.

David had arranged for the use of a campground area for the weekend that is about a mile east of downtown Dawsonville, Georgia. About 2/3 of the participants arrived Friday evening and set up camp only to get rained on for most of the night. The first challenge of the event was to locate the rest of the participants as the entrance to the campground was just a little dirt (mud!) path that led for 3/4 mile down into the woods and through a kudzu patch to the side of a creek where the local mosquito population was having a feast on British flavored mammals (at least until my diesel showed up). Down was a very significant term when the time came to muster up and leave for the first phase of the days festivities, a leisurely ride over to the nearby town of Ellijay for lunch at a local barbecue joint. The night's rain had combined with some of the good old Georgia red clay to make two spots on the trail out of the campground a challenge for the Land Rover owners whose tires we're more pavement oriented. One spot could be bypassed by cutting up through the kud tu (great traction but watch out for concealed

... continued on p. 10

# Yankee Rovers 1994

### **David Ducat**

1994 gave us some of our best turnouts yet, as in June at the British Car Show at Gillettes Castle. This show is organized by the Connecticut MG Club and our marque had one of the highest number of vehicles showing up. Mark Ohno led our group by having both of his 109s on site and Dan McCarville, from NY state came from the farthest distance. Bob Lowe's Ferrari "Red Rover" was another attention getter and Jeff Case took "Best of Marque" with his showroom '63 88.

The weather was perfect and our cooking got a good amount of attention. With the number of grills we had going, other groups thought we were operating the concession stand!

continued on p. 11



Randy, Steven, Sarah, & Linda Truax stopped by to check out Linda's handy work on the banner she made for the club.

stump holes, rock walls, & buildings) but it took about an hour for all of the vehicles to make it up to the Dawsonville town square where we lined up for the ride over to Ellijay. We had a good representation of Land Rovers including Mark Ritter's 1994 Discovery, Phillip Brook's Defender 110, three 109s and five 88s along with the Jeep CJ-7 camera car and Mr. Porter's M38A1 Jeep.

Every time we stopped for the rest of the day doors would pop open and people would scramble for the best angles to get photographs to commemorate the sight of so many Land Rovers in one

spot. At times it looked liked some kind of bizarre ritualistic dance and passing locals looked at this gathering of unusual vehicles with amazement. One of the wives/girl friends along for the ride commented that she had never seen such a bunch of nuts. This has got to be one of the best documented Land Rover events of all time. One of David's friends was in a chase Jeep with a video camera and he would zoom past all of the Land Rovers and then pull over and videotape us as we went by. The camera Jeep got stuck behind my diesel 109 station wagon until the passenger complained about getting carsick from the diesel fumes and we let him pass.



John Dorr's 109 with soft top & John Dillingham's Series III 88.

We stopped at the Blue Pig Barbecue north of Ellijay for a somewhat later than planned lunch before starting into the Rich Mountain trail. The service staff was a bit overwhelmed by the sudden influx of about 30 people so to speed up the procedure. David Porter's father generously bought lunch for the whole crowd. Again, thanks a bunch guys.

After one more photo opportunity at the entrance to the trail where we lined all of the Land Rovers up against a backdrop of the North Georgia mountains, we locked hubs and started up the mountain. About two miles up the mountain trail we ran into the first major obstacle of the day, a spot where the road had washed out from some heavy rains earlier in the week. Conditions were still pretty slimy from the previous night's rain and the slick clay made even standing up on the trail difficult. The surface was sloped toward the right side of the trail where a 2 foot deep ditch and overhanging bank was waiting to leave its mark on the body work of any vehicle that was unlucky enough to slip sideways into its clutches. David Porter's 88" made it past this little obstacle as did his father' M38A1 but the spinning wheels of their vehicles churned up the surface and made it even slicker. These two vehicles had the most aggressive tires of any in our group and the owners with the newer vehicles began to look a little worriedly at the bank at the right side of the trail. The rest of us stopped and grabbed shovels to do a little trail repair as David went on ahead to see what other damage the rains had done since his scouting expedition two weeks before.

A short aside here; those little U.S. Army folding entrenching tools aren't much good for heavy landscaping - we could have put a mattock and full sized shovel to good use here and one of the main tenets of the Tread Lightly program is to use the existing trails and not create new ones. Please carry the proper tools to repair the trails that you use instead of letting them erode to the point where it is easier to cut a bypass than fill in a ditch.

As the rest of us worked to level out this spot and scrape off the top layer of traction robbing clay slime at this first obstacle, David worked his way up the hill past another spot where the trail was badly eroded. At one point his right wheels slipped into a large rut and he was forced to winch himself out; collecting a rather significant scrape in his body work just aft of the front wheel well. David's father also made it past this point in his M38A1 as did John Dillingham in his limestone SIII 88" but the next vehicle in line, a SIIA 109" diesel pickup was having doubts as to whether he could make it up without doing any damage to his truck. The next vehicles in line, a red 88" with street tires and the 110" had similar reservations so I offered to bring my 109" wagon up from the rear of the line and see if the trail was going to be too difficult this day for the long wheelbase vehicles.

After some shuffling around we got my 109 to the head of the line where it cleared the first obstacle with no problems but would not climb up around the slick spot that kept making it slip down into the large washout that had stopped David's forward progress. After several attempts at all the available lines around this obstacle were unsuccessful a conference was called to discuss the situation. The three vehicles that had made it past this point reported that the trail was pretty washed out for the next 1/ 4 mile and that there were several spots that were potentially as difficult as the ones that were

already giving us so much trouble. The owners of the 110 and the Discovery were understandably reluctant to risk beating up their vehicles so they were ready to turn back before doing anything stupid. If conditions hadn't been quite as slick and we had thought to bring some better shovels we could have made it over the hill but we had no way of knowing if the trail had any more unpleasant surprises in store for us. David had scouted the route two weeks before but all of the heavy rains just one week later had drastically altered the trail's conditions. With many more miles of trail of unknown condition beyond and it getting late in the day we decided to try another trail that I was familiar with that was only a short detour off the way back toward the campground.

The Appalachian Trail officially begins at Springer Mountain about six miles from Amicalola Falls but most hikers start on the approach trail that begins at the top of the falls. The Nimblewill Gap road leaves from the top of Amicalola Falls State Park and parallels the approach trail to the Appalachian Trail. The road leads up to the site of an old fire tower and then ties back into a forest service road that provides scenic views of some of the heavily wooded backcountry. I knew this trail would provide enough of a challenge without being so threatening to the bodywork as the Rich Mountain Trail and would only take about an hour to complete so we regrouped and headed off in convoy for Amicalola State Park. Several of our group had elected to head for home so only eight of us tackled this trail but all of the ones that stayed with it said they really enjoyed the ride. The trail is a narrow unimproved one lane track that winds up the side of the mountain through high banks of mountain laurel and heavy woods. The road is just rough enough to require four wheel drive but not so extreme as to make some of the fairer sex get all nervous as my wife is very prone to do when the Land Rover starts to lean way over. The sun was beginning to set as we reached the high point on the main trail and stopped for quick breather before heading down the other side of the track to where it intersected the forest service road. The smell of the mountain laurel was filling the air and the wind whispered gently through the trees as we looked at the mountains rising all around us.

The owners of the Land Rover who had driven up from Florida for the weekend said that this was well worth the trip, a sentiment that was echoed by all of the participants.

We convoyed back down the mountain through the darkening woods until we reached the paved road connecting Dahlonega to Ellijay where we stopped to split up into different groups. Some of the Land Rovers were returning to the campground but those of us that had to head toward home thought better of getting down into the muddy track that had given us so much trouble earlier in the day.

The event was generally a great success and we learned a few valuable lessons for the next one. We learned you can never have too many digging implements if you have to regrade a bad spot of trail and that Maxx tool that Rover's North sells began to look a lot more attractive. Some of us learned that our tires were woefully inadequate in slippery red clay. Steve Johnson came up from Tifton in south Georgia and he said that the clay was a whole new education for him since he is used to sand and black mud but he also said it was fun to have real hills to climb. Next time we will also plan for a less leisurely lunch break although we all certainly appreciated Mr. Porter's effort to speed it up. Another tip is: if you haven't taken your door tops off for a while, don't wait until you are at the entrance of the trail ride to attempt it. While beating on your Land Rover with a rock is sometimes real tempting it is very poor form to have to do it in full view of a Jeep driver.

Yankees, continued ...

A lot of us were approached by people who were either wanting to buy a Land Rover or had them but weren't aware of the organizations out there supporting the interested. After contacting and calling back and organizing our group it was very satisfying to have 13 Land Rovers in attendance.



Mark Ohno's 109 Regular (center) and his 109 Station Wagon ( right).

Rob Lowe had 6 Land Rovers show for a trial run which turned out to be a great gettogether. The group did the off-roading, then regrouping at his house for a great meal and Camel Trophy videos. Bob's 109 wagon is under restoration and is heading in the same expertly restored condition as his red Rover.

Although I missed the August show in Granby, CT, our club again had an excellent turnout with 11 vehicles. Reports indicated that a lightweight showed up and some new people whom I hope will join our group.

Our latest outing was our annual "Dirt Road Tour" in Lebanon, CT. 9 Land Rovers gathered for coffee, doughnuts and a lot of discussion before the tour. I co-piloted for Art Patsouris since my '69 Bug-eye 88 is still not road worthy (a fact that has brought scorn from my fellow members). After 8 cars made the scenic run we were back for some sandwiches and more info sharing (the eating/ talking theme prevails).

The threat of a formal meeting is still looming but the enthusiasm and story sharing has overpowered the threat to this point. With the increasing numbers and the variety of events being planned, I think that any formalities we may require will be less intimidating in the future. One challenge we may consider is to find an interested party with a land Rover newer than 1973, as all of our Rovers are Series III or older.



Rebuilt Transmissions, Transfer Cases, Differentials

British Trained Land Rover Specialist

Call Us! 510-686-2255





# More Rovers in the Movies

### Here are a few more notes about Land Rovers in the movies:

Here are some other movie titles to add to Wendell Cotton's list of movies from the Fall 94 Aluminum Workhorse that have Land Rovers in supporting roles. Some have only brief glimpses of our favorite vehicles so you have to be paying attention:

One of my personal favorites; Crack in the World, a 1960s science fiction movie that has many scenes with Series IIA Land Rovers ferrying scientists around an island as they try to stop the Earth from breaking in half. This movie shows up on TBS every six months or so and has a particularly nice 88" IIA running around topless.

The Passenger; starring Jack Nicholson, dates from about 1971 and is the story of a journalist that switches identities with a dead man in his hotel in central Africa. He learns that he has assumed the identity of an arms dealer that has a number of people trying to track him down. Nicholson gets a blue 109" wagon stuck in the sand and proceeds to beat hell out of it with a shovel. This movie starts off well but gets sort of arty and slow towards the end.

I recently saw a Doris Day movie on TBS that had Keenan Wynn(?) playing an eccentric uncle that drops in for a visit and disrupts her suburban lifestyle. He has spent the last 15 years in Africa as a professional hunter and he brings his "Jungle Buggy" and a baby rhinoceros with him. The jungle buggy is a very choice marine blue Series IIA 88" that appears in scenes throughout the movie. I didn't catch the name of the film but it was probably made about 1965.

In Roxanne, Steve Martin drives a 109" three door hardtop as he tries to romance Kim Basinger.

In Barfly, Mickey Rourke and Faye Dunaway run past a somewhat ratty looking 88" in one scene (I said you had to be paying attention).

Another quick glimpse of a Land Rover is the opening scene of Close Encounters of the Third Kind.

Sylvester Stallone has a 109" station wagon in Cliffhanger.

Of course everyone has seen the 88" used in Three Weddings and a Funeral.

A Faraway Place was on Wendell's list but he hadn't seen it. This Disney movie is set in the Kalahari Desert and has three or four Land Rovers in several scenes. Beautiful photography, a very nice IIA and even a Series I are features of this move about a bushman leading two kids across the Kalahari to escape some poachers that have murdered their parents. Unfortunately, the Series I gets dynamited. Jack Walter, GA

### These were found on the internet:

Subject: LRs in Movies—Date: Sat, 28 Jan 1995 18:38:43-0800 From: Benjamin Allan Smith <br/> <br/> dens@archimedes.vislab.navy.mil>

<u>Highlander III</u>. First off I must say, there should only have been one. Highlander III is a weak rehash of Highlander (which is a really good film) and only marginally better than the really lame Highlander II.

In the beginning of the movie was a white 110 diesel. At the end, driving through the highlands, they had a Range Rover.

-Benjamin Smith

Science Applications Internation Corporation
China Lake Naval Air Warfare Center
bens@archimedes.vislab.navy.mil

1972 Land Rover Series III 88

Date: Tue, 31 Jan 1995 08:34:36 -0500 From: Jimmy Patrick <jimmyp@cksp.demon.co.uk> Subject: Land Rovers in Movies

R. Pierce mentioned a few more LR movies yesterday. I saw one this weekend:

— "Man with the Golden Gun" the Hong Kong police arrive on a murder scene in a nice series II/IIA 109 with a tropical top and police paint scheme.

From: "John R. Benham" <BENHAM@WFOCLAN.USBM.GOV>
Date: Tue, 31 Jan 1995 11:22:54 +1100 Subject: Land Rover Movies
Dear LRO's

Last night I rented the 1975 film 'Killer Force'. It stars Peter Fonda, Telly Savalas, Christopher Lee, and the incredibly sexy Maud Adams. Oh yes, O.J. Simpson is in it! If you want a movie that has a lot of Land Rover action, this is the one! Land Rover SII and SIII 109 pickups painted yellow and white were driving and flying everywhere in the western African beach desert area. Some had machine gun mounts in the back. A diamond heist is the movies theme, but with this 'B' film fare, who cares. In fact, any theme and film made by the movie company 'American International' - who cares!

Rovers crashed, Rovers burned, then rolled, stopped bullets, didn't stop bullets, flew in the air, came apart while driving! The director must have destroyed no less than eight or ten Land Rovers during the filming! After seeing it, I wondered 'What did they do with all of the Land Rover parts lying about in the desert?'.

John R. Benham Spokane, WA USA 1968 SII 88 'Bwana Mobile'

From: "Keith Coman" <BAKC@giraffe.ru.ac.za> Date: Wed, 1 Feb 1995 09:01:42 GMT+0200 Subject: Re: Land Rovers in Movies

>>Pierce Reid sez...>>> Someone was compiling a list of Land Rovers in Movies... I had a couple more:

There's an old British technicolour movie from around 1955 called "Simba" - - basically an action feature to do with the Mau-Mau in colonial Kenya.

More to the point, there's lots of Series 1s — at one stage a lion jumps into an open-topped SWB to say howzit to the hero behind the wheel. (Leo ultimately gets a knife in his ribs for his pains, a'corse!) Keith Coman

Date: Mon, 6 Mar 1995 13:22:36 -0800 (PST) From: Morgan Hannaford <morgan@nature.Berkeley.EDU> Subject: good rovers-bad movie (fwd)

— Forwarded message — Date: Mon, 6 Mar 1995
10:19:45 -0800 (PST) From: Morgan Hannaford <morgan@nature.Berkeley.EDU> Subject: good rovers-bad movie Another movie to add to the list!

I watched <u>Lethal Ninja</u> last night, and  $\Gamma$ m really embarrassed! But I looked up the subject in the T.V. listings and it said a ninja dude rescues damsel in Africa. There has to be a Rover in this one. And there was, several.

I don't want to ruin the plot for you, in fact I can't remember what the plot was- but, here are some interesting points:

- 1) Ninja hiding in the back of a topless 109, gives guy the death grip!
- 2) 2 blown up Rovers 1 88 and 1 109 (as per above).
- cool Ser. III 109 SW, military green with big tires! This is driven by the heroes (zeros). Although I cringed when they said "get the jeep".
- 4) Squealing tires from the 109 SW on dirt roads! Cool chase scene when the 109 SW does "Rockford Files" type maneuvers. Does the Rovers North off-road school teach how to do a reverse 180 sliding turn in a 109?
- 5) Cool braking technique to avoid going off the cliff, roll the Rover. Then get out the back door that opens the wrong way (hinges exposed and

Joe Bob would say "check it out", if he owned a Rover. Ciao, Morgan

# Gallery



Bud Peeds '57 Series 1 109 (MD).



This is a Lode Lane photo of the 5-door ES Discovery. They are it members but we thought you'd like to see it.

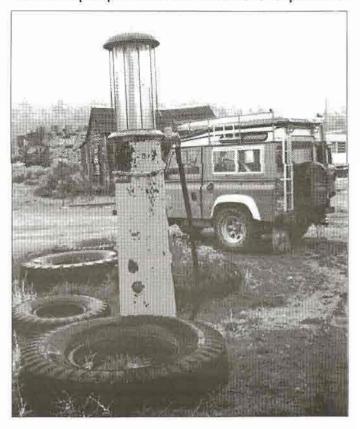


LROA RCs, Cliff Johnson & Peter Donnely shown looking over Cliff's 109 with a U.S. military trailer.



John Deneke's 67 109 which he's had since new! Note dual tropical windows. And it has a V-8!

Marvin Mattson's wife, Nancy attended the Belmont photo workshop with him last year. Here, she shares an artistic perspective of the Land Rover experience.



# **Articles**

# Defender 90s do the Rubicon

Norman Hendry, Alberta



As in all things worthwhile, before the fun part, there is the less-than-glamorous preparation stage. Here, finally in California, the participants take on the task of distributing equipment.

The Rubicon Trail; a 4X4 adventure across the Sierra Nevadas from Georgetown to Lake Tahoe, California, Thirty-five kilometers of rough, tough, boulder bashing, metal bending and axle-twisting terrain.

After many telephone calls to the Jeepers Jamboree HQ located in Georgetown we were entered in the 42nd Annual Jeepers Jamboree. This was an excellent opportunity to prove to the Jeep afficionados that the Land Rover was as rugged and capable as the television adverts were proclaiming. (Land Rover have launched a massive publicity campaign to herald the arrival of the Defender and Discovery in the States and Canada). This would also be the first occasion that a Land Rover 90, especially a diesel, had crossed the 'Rubicon'. Our entry comprised of two Land Rover 90s and a Jeep Cherokee.

We used the Jeep as the support vehicle, due to the greater speed and load carrying capabilities with the roof rack. The red Land Rover driven by Kevin Algar and navigated by Richard Coverdale was completely standard apart from the tyres, Warn X8000i winch and underbody protection from Southdown 4x4 Products. The blue Land Rover driven by myself and navigated by Rex Smith had an ARB Locker installed in the rear axle, Rancho RS5000 shocks, BF Goodrich Mud Terrain TA tyres, underbody protection from Southdown 4x4 Products and a Warn 8000i winch. Both Rovers also had custom made canvases (that provided greater visibility and draught exclusion) and mandatory CB radios.

Sunday morning (24 July) had arrived and we eagerly departed Suffield, Alberta. Canada for California. Sunshine and clear skies were forecast for the duration of the journey and our thoughts turned to the air-conditioning unit that was a standard fixture in the Jeep but alas, not in our Land Rovers. The scorching heat and arid air were of little consequence to Lee Jones and Duncan Davies who were wafted in cool air throughout the journey in the Jeep. We crossed the Canadian/American border at Coutts without incident and our journey into America began. We traversed the length of Montana into Idaho and set up camp for the night in Pocatello. After 13 hours and 1145 Km's of driving we were glad to park the Rovers and stretch out on our camp beds. Due to the warmth of the night air we decided not to erect our tents but to sleep under a blanket of opalescent stars. A dawn chorus of chirping birds woke us to a bright and beautiful day. Forgetting all that he had been taught, Rex failed in his repeated attempts to light the Bar-B-Que on which we were to prepare breakfast, Duncan became the saviour of the day by lighting it at the first attempt. During breakfast we were approached by a gentleman from Sacramento, California who was intrigued by our accents and the Rovers and were soon engaged in a discussion over the improvements in the new Land Rovers as he was the owner of an 88" Series IIA. The transformation from the green and forested area of Idaho to the barren wastes of Nevada was amazing and rapid. The seemingly endless and arrow straight roads that merged with the horizon combined with the desolation and heat turned this part of the journey into a soul and mind numbing experience. During a refuelling stop at Elko the temperature was 105°F in the shade and it was here that we decided that we would travel as far as Winnemucca before calling it a day. Winnemucca was originally named French Ford and later designated Winnemucca in the early 1860s. The name honours Paiute Indian

... continued on page 16

# **Tough Enough For Adventure**

## Roy Caldwell (MT)

For the twelve men and women standing in swimsuits in the 35 degree air, adventure was not in their thoughts. The ice cold water of the pool was. It was 7 AM and a swim in the pool at the Grand Junction Colorado Hilton was the first physical test in their quest to become one of four members on the 1995 U.S. Camel Trophy Team. Camel Trophy is an adventure worth a cold swim and thirty hours of nonstop physical and mental punishment. These twelve didn't pay to be here, they worked hard to get invitations to this weekend of toil in the Rockies. The Camel Trophy is considered to be the Olympics of 4X4 driving. The ultimate combination of driving, physical and intellectual skills. In the fifteen year history of the Camel Trophy, the adventure has been conducted in such exotic and harsh locales as the Amazon, New Guinea, jungles of Borneo, the outback of Australia and on the ice of Siberia. Matching the diversity of event venues is the international composition of the teams. Teams from Switzerland, France, Russia and even the Canary Islands have competed.

The 1995 adventure will have a field of twenty international teams. A chance to slog through mud, combat insects and drive a Land Rover Discovery for endless hours is why the twelve are shivering in the Colorado morning air.



Besides being tough, you have to have navigational skills.

Year to year the geography and the extreme conditions for the adventure may change but the challenge remains the same. The challenge is navigating miles of uncharted dirt tracks, accomplishing special physical and technical tasks while maintaining a spirit of cooperation and camaraderie with the international teams. For the U.S. Camel Trophy Team, four of the candidates are ground breakers. This is the first year women have been invited to try out for team positions. Team Coordinator Tom Collins sorted through 1600 plus applications to eventually invite the four women and eight men to the team trials.

Collins explained some of the trial objectives, "the trial tests personalities, personal motivation and motivation to be part of a team." The ability to balance personal best and team work is a hallmark of successful Camel Team members. These qualities plus the desire and ability to endure hard labor, cold and wet, in addition to sleep deprivation would be noted and used by Collins and his team of observers to make the choice of the final four. With the frigid swim behind them, wet headed candidates grabbed their bags and headed for the parking lot for transport to the trial site. Smiles broke out among the twelve as they got their first look at the purposeful mustard yellow Camel Team Discoverys and the sparkling white luxury Range Rovers. Their smiles of anticipation were the last to be seen that would show any energy or enthusiasm. For their voluntary hours in hell, Tom Collins and crew designed a test site at the foot of the Bureau of Land Management Off-Road Recreation Area know as the Bookcliffs. A threatening overcast held the promise of rain or snow and gave the test area the depressing brown and gray look of a disaster area. Vegetation was low scrub and bushes of an unidentified type. Several of the candidates wore stunned expressions when they got their first look at their hell. The next 30 hours would tax their minds and take from them every bit of physical strength and ability they possessed. It would also verify their reasons for coming to these desolate mud hills.

... continued on p. 17

# Know Your Rovers: The First Land Rovers, 1947-1953

# MJM (ME)

Rovers chief engineer, Maurice Wolks came up with the idea for a "Land Rover" while on holiday in Wales during the Easter Break in 1947. Earlier in the year Wilks purchased a surplus, U.S.-built Willys Jeep for his own use. Not only would this vehicle serve as the inspiration for the "Land" Rover, but it would provide many of its components for the very first Land Rover (see drawing #3). Among the items used were: chassis, the complete drive train (up to, and including the Jeep transfer box), the Jeep steering assembly (up to, and including the steering box). The prototype land Rover had a center steering wheel (neither RHD or RHD) linkage to the Jeep steering box was via chain and sprockets. From photo evidence it would appear that many other items from the Jeep were incorporated into the prototype. Quite a number of these bits 'n pieces are standard items on civil and military Land Rovers to this day.

Simply put, without getting too bogged down in the history of the times, and the Rover Car Company's reasons for getting into the 4X4 business, the Land Rover was intended as a stopgap product to keep the company "in business" in the lean years following World War II. At that time all Rover had to offer was its prewar luxury car designs that no one wanted or could afford. They also had a prototype "compact" car in the works but the market for that vehicle did not seem to be materializing.

The postwar British economy was in a shambles. Strict rationing was the order of the day and there was an enormous foreign debt to take care of. The Ministry of Supply ordered (that's putting it mildly) all manufacturers to export up to 75% of all their products. This draconian policy was necessary to bring in the vitally needed hard currency to help service the debt. Truck and tractor manufacturers were doing brisk trade overseas but there was little or no demand in the rapidly changing postwar world for what Rover had to offer. Prior to the war, the Rover Company did very well for itself providing luxury cars to the upper classes. So smug were they, that they never built left-hand-drive vehicles, there

... continued on p. 18

### Rubicon, continued...

Chief, Winnemucca, whose people frequently fought with the white men for control of the desert and mountains that were their home. On arrival at the KOA campsite we were glad to see that they had a swimming pool. No sooner had we completed registration and we were in the pool cooling off after our drive of 709 Km's. After our swim we cruised the town 'strip' in the Rovers and noted the reactions on the faces of onlookers. When we parked outside the local Subway restaurant, the Rovers attracted a gathering of curious residents. Many had never seen a Land Rover before and we were soon engaged in the educating mode. No it is not Japanese, Land Rovers are made in England, Yes it is a diesel and only

2.5 Litre, No it does not have air conditioning. We returned to our campsite for an early night as we planned to make an early departure as the forecast was for 115°F. We departed for Coloma at 0600Hrs and the sun was up and making its presence known. The temperature was rising rapidly and at 0700Hrs it had reached 75°F. Despite the heat and lack of wind the oil and water temperatures remained normal.

The lush green pastures and woodlands of California with the cool breeze were akin to an aphrodisiac after the oppressive heat of the Nevada desert. En-route to Coloma we called in at the Elks Lodge, South Lake Tahoe, the designated "Finish" of the Rubicon Run where we encountered another entrant. This gentleman and his wife had par-

ticipated in every Rubicon Run since 1966 and his tales of what we were to encounter along the trail heightened our excitement. He was driving a Willys Jeep that had been radically modified. Some modifications were a Ford 351 cubic inch V8 producing 500 BHP, Corvette rear end with independent suspension, Diff. locks in both axles and a 3" suspension lift. This was a serious Jeep.

As we departed the Elks Lodge more Jeeps began to arrive on the rear of pickups, car trailers and in the rear of fifth wheel trailers. It seemed to us that we were the only entrants that had driven to the event. We arrived at our camp site in the gold panning town of Coloma and once registered we set off to explore the surrounding area and visit the mining museum and national park.

We had been advised by the organizers to register the day before the event to avoid possible delays and provide the opportunity to clarify any area of concern. On arrival at Georgetown we were overawed at the quantity, diversity and quality of the Jeeps parked along Main Street. Georgetown was destroyed by fire in the 1800s and to help prevent any reoccurrence the rebuilt town features a main street 30m wide to act as a natural fire break. The Jeeps were parked two abreast and logging trucks were driving past on either side. The Rovers attracted a large amount of interest from other participants, primarily because Land Rover 90s have never entered this event and the fact that they were diesels. Land Rover released the American/Canadian version with the 3.9 litre V8i engine as the only option. There were many raised eyebrows and looks of disbelief from the other participants when we explained that we had driven 2374 Km's to participate in this event as many of them had trailered their Jeeps to the event from San Francisco and Los Angeles for fear of them breaking down en-

Once registration and the purchasing of souvenirs and T-shirts were completed we departed for South Lake Tahoe as we were advised by the organizers not to attempt taking the Cherokee over the trail due to the heavy winter run off which had made the trail extremely difficult this year. This resulted in a complete change of our plans as we now had to distribute six people and their personal kit between the two Rovers. The car parking area at the Elks Lodge had been transformed into a major staging/servicing area for 4X4s since our previous visit. We packed the Rovers with what we deemed were essential items and

crammed every item that we did not require into the Cherokee. Someone who wishes to remain anonymous packed the tents in the Cherokee, thankfully the weather was such that we did not require them but our tent? area at Rubicon Springs was a source of amusement for other participants. On the return journey to Coloma we stopped at Placerville to refuel and restock our supply of drinks. Placerville had become a Jeep Mecca since we had driven through that morning, on every street corner and in most of car parks and petrol stations there were Jeeps to be seen. The air was alive with friendly greetings and waving arms as 'Jeepers' passed each other or pulled over to talk and the deep rumble of so many highly tuned V8 engines echoing and reverberating off the houses in the narrow

streets was music to the ears. Despite what channel (except the emergency channel) we tuned the CB radio into, all we could hear were 'Jeepers' greeting each other, making new acquaintances, giving directions to meeting places or food locations and generally having a great time.

Dawn and this was it. The Rovers

were loaded and we were on our way to Georgetown as we had been advised to be there before 0630Hrs to avoid the congestion and ensure that we were on time for breakfast. All meals are included in the entry fee, commencing with breakfast on the 28th and culminating with an evening meal at the Elks Lodge on the 31st. The number of Jeeps parked along the length of Main Street had more than

tripled since our previous visit and the atmosphere was electric. We had become celebrities overnight and the crowds gathered around the Land Rovers to ask questions about our journey and the capabilities of the Land Rover. After a hearty breakfast and many cups of coffee it was back to the Rover's and await the "start." This was organized chaos, kept in check by Danno Raffeto, as Jeepers jostled for position and attempted to remain in their respective groups. Once underway the massive convoy, comprising of 150 vehicles, snaked its way to Uncle Toms Cabin 42 Km's away and the start of the trail.

The tranquil journey through the woods and along gravelled tracks came to an abrupt end as giant slabs of granite, over fourteen hundred metres long and seven hundred metres wide stretched before us. These slabs were deceiving in appearance as at first glance they looked smooth however, on closer inspection they were a series of diff-smashing steps and deep rock channels that would wrench the steering wheel out of your hand or buckle a rim if given the chance. We were averaging two miles an hour over this terrain when we rounded a bend in the trail and came to a halt behind a procession of Jeeps. From the CB chatter we knew that we had arrived at the infamous Walker's Rock. We alighted from our Rovers to go on foot to study this obstacle and plan our route of approach. The 'Rock Rollers' (a name given to the trail guides who are on hand to offer advice and assistance at the obstacles deemed as difficult to nigh on impossible) were advising the novices on which route to take and we listened to this and registered it for our turn. With the transmission diff. lock and the ARB locker engaged Walker's Rock was conquered with little effort. Kevin was not as fortunate. He cross-axled and had to try again before success was his.

Throughout the day we lent assistance to other participants who had become high centred or were well and truly stuck fast on a rock, the Jackall high lift jack was a definite advantage in situations like these. Often it was sheer muscle power that resulted in a Jeep becoming mobile again and the convoy resuming its journey. The continual pounding and jarring against rocks resulted in my fuel tank being pushed rearwards and the rear mounting bracket pin-pricking the tank. The tank was swiftly drained to below the level of the hole (the drained off fuel was poured into Kevin's Rover) to prevent contamination of the surrounding area. We were soon underway and came upon a pair of broken Jeeps, one that had fried the automatic gearbox and another that had ripped off the front spring ...continued on page 20



The Rubicon Springs Garage has anything you could need to get you along your way. And if they don't have it, they have a helicopter to go fetch it.

### ... Tough Enough, continued

Daphne Greene from Ross California when ask why she was at the trials commented, "It was the challenge. A chance to learn and share with others. " To forcefully harmer home personal motivation and commitment, Tom Collins designed a six mile run in the thin mountain air that would make each of the twelve quietly question why they had come. That run was just the beginning. At the end of six up and down miles, was a rope climb that had to be completed to finish. As the clock ticked away the hours, the candidates received no breaks and the team of observers watched them constantly. After the run was a team building exercise of the Spider Web. The object of the task seemed simple enough; pass all members of the team through a rope spider web using each opening once and not touching any of the ropes. With only 40 minutes to complete and the eagle eyes of the observers watching it was another taste of timed stress, it was not the last. After a short introduction to the Land Rover Discovery team vehicles, it was off for another

run— a run with a difference. It was an orienteering run, and the stop watch & demonstrable skill with a compass advanced the stress level several more notches. As the hours piled up, stress and fatigue could be seen effecting each of the candidates. Some were not as upbeat as they had been, some were obviously self-absorbed.

After the compass run the activity moved on to more team building exercises, more written tests, winching practice, gymkhana driving test, bridge building and finally the driving tasks. The sun had long since set in the west before the actual driving of the Rovers got underway. All three driving tasks had the candidates pushing the Camel Discovery into and out of places they never have imagined a vehicle could go. Night driving tested the ability of two person teams to work together to solve a continuous series of off-road problems. It also allowed Tom Collins a chance to observe and evaluate how various combinations of the candidates worked together. In the early morning hours of Sunday the candidates knew that it was almost over. There was one more written test and two more driving tasks and it would be over. Tom and his crew had a few more surprise for them. The written test had only one question and it was about Time/Speed/Distance math calculations. TSD is the heart of rally driving. It is how you know if you are driving

to fast or to slow and how the differences can be made up. The test was given in between work with chain saws, axes and the manual flat tire fixing task. None of the candidates had much brain power remaining. For some it was a sheer act of will that they tried the test at all. The grinding noise of a badly shifted gearbox was almost audible as some of the candidates took the test. If this was not enough mental and physical grinding yet another driving test was their introduction to the on-board rally computer. As the sun light of early morning filtered over the horizon the candidates had one more driving test before they got their pass from purgatory. Some of the candidates felt the last test was hell but a cold, wet and muddy hell.

Candidates were paired in teams that Tom Collins felt worked the best together. They had to drive a tough off-road route using the rally computer. At designated points the navigator was required to bailout and run across the hills using only a compass bearing, then catch up and rejoin the vehicle. Sounds easy except this had to be done carrying one full and one empty fuel can. Further along the route the roles were reversed and the driver toted the load, relying on the compass to cross the muddy hills. In a plum of snow and mud the last team slid the Camel Discovery to a halt as a cheer went up and tired smiles appeared on all faces. It was over. It was time for a hot shower and sleep. But things aren't always over when they seem to be. The trail back to the hotel included a stop at a local car wash and a final last task. The task was to wash all the vehicles, all ten muddy Rovers. It was now mid morning on Sunday. By noon all the Land Rovers were clean and all twelve candidates had disappeared into their rooms.

Whether they made the final four or not, all twelve knew the satisfaction of having survived. And they had survived 30 hours of the most intense mental and physical grinding that anyone could voluntarily undertake.



A warning to all who would attempt the Camel Trophy.



Daphne Green on the rope climb after the 6 mile run.



Muscle winching team exercise with the Camel Trophy team Discoverys.



U.S. Camel team hopefuls - still standing after 30 nonstop hours.

Know your Rovers, continued ...

being more than enough business at home and in the right-hand-drive colonies. Another post-hostilities problem Rover faced was the rationing of raw materials, least of which was a severe shortage of steel. The Ministry of Supply controlled the flow of these vitally needed raw materials and companies were allocated stocks based upon their export performance. Export was something the Rover company had little experience with.

With the future of the company at stake, the decision was made to rush headlong into getting a 4X4 into production. All the usual design and development procedures were dispensed with. There was neither time nor the money to develop engines and gearboxes, or the tools, jigs, molds, presses, and dies that are a necessary part of getting a production line going. Everything needed for the new vehicle would have to come from available stocks and used "as is" or modified. Major components such as the chassis and the bulkhead would have to be made by hand. Once they got the "show on the road" (if ever), then and only then would money be invested in the necessary tooling.

No sooner had Wilks returned from his holidays than work began. The above mentioned hybrid Jeep/Land Rover prototype was driving about in September 1947. The engine and gearbox came from the Rover car line. The new body on the Jeep chassis was a type of aluminum used in aircraft manufacture as was the paint the vehicle was finished with. Both of these items came from stocks held by Rover from its wartime aircraft manufacturing efforts.

While the prototype was being built, more Jeeps were acquired for test and evaluation purposes. However, these vehicles were "purchased "by Rover staff and not by the company itself. Wilks' Jeep is believed to have been the donor vehicle for the Land Rover prototype. The prototype met its demise early in 1948. Why the first Land Rover was dismantled is a mystery. If it had something in common with preproduction and production models, a fellow could understand the need to take it apart to see what was (or was not) falling apart. It is possible that Rover was destroying the evidence. I'm sure that the Willys Overland Company of the USA would have had something to say about their product being used to help another company develop a vehicle that would soon overtake them in the world market. Lessons learned building the prototype helped with design and development of the preproduction models. They, in turn, helped with the setting up of an assembly line for the production models. Work on the pre-production Land Rovers commenced in late 1947. In all, 48 pre-production vehicles were built, the first rolling off the line on or about March 11th, 1948. In some way or another, most (if not all) were different from one another. All had galvanized chassis. Some of the first had an integral bumper, while later ones had the bolt on type. All were skinned in Birmabright, with the first 40 vehicles painted a light green (sage green). The final 8 were painted in a darker shade of green (bordering on olive green).

The first time the public got wind of the new Land Rover was an article in "The Times" newspaper on April 20th 1948. The first official public appearance of the Land Rover was held ten days later at the Amsterdam Motor Show, held in the Netherlands, April 30th- May 9th, 1948.

The last of the 48 pre-production Land Rovers were completed around the end of July, beginning of August 1948. By that time production models were already rolling off an adjacent assembly line. By the end of 1948, the pre-production batch were spread all over the place undergoing trials and the like. Some were sold to early customers whose orders could not be filled by production models. Many of the pre-production 48 survived to this day (what else is new, eh), including the first, R.01.

The first production models had permanent 4WD. The galvanized chassis of the pre-production batch had given way to silver paint and

duralumin replaced the birmabright. In time, the silver painted chassis would give way to green and after a May 1949 Ministry of Defence order for 1878 vehicles, Land Rovers were finished in bronze green, whether they were destined for the military or not.

The production models were being constantly refined. With the phenomenal success of the 80" Land Rover the Rover Company could now invest in machinery to do the work that had been done by hand. Constant feedback from customers kept the Land Rover in a constant state of change. Every month or two, there would be something new to take note of.

Trying to identify a specific model is no easy task, serial number or not. There always seems to be an interim model between two distinct versions. Nothing was wasted. While stock of a particular part lasted, it would continue to appear on a "new" model, until there was no more. A number of "interim" Land Rovers were shipped to North America sometime in the early 1950s (see drawing #5). Six are known to exist, three are on the road and two are under restoration. The serial numbers date them as 1950, but they have features fating from mid 1949 to at least mid 1951. One unique feature to all is the relocation of the bulkhead sidelights to a nonstandard position on the front wings. The fairings that housed the sidelights in their original location are still there. The most recent of these "N.A. Spec" 80" Land Rovers was discovered in superb complete, original, rust free condition in a Tuscon, Arizona junk yard. Its owner is restoring it to original condition - wing mounted side lights and all.

Final note: During their day, what we call Series Ones were simply Land Rovers. When the 86" and 107" came along they became Land Rover 80", 86", or 107". Same applies to the 88" and 109" versions. With the advent of the Series II Land Rovers in 1958, the term Series One came into being. Since then all vehicles built prior to 1958 are referred to as Series Ones.



# Land Rover Literature ORIGINAL Automobile Literature 1900-Present



WALTER MILLER 6710 Brooklawn Parkway Syracuse, N.Y. 13211 U.S.A. PHONE: 315-432-8282 FAX: 315-432-8256

Over two million pieces of ORIGINAL literature in stock. World's largest selection of ORIGINAL U.S. and foreign automobile and truck sales brochures, repair manuals, owner's manuals, parts books and showroom items. I am a serious buyer and travel to purchase literature.

## Know Your Rovers: The Series I

1 & 2: Front and rear views of a typical preproduction vehicle. Production models from July 1948 to June 1950 looked much the same. Straps and buckles were used to secure the canvas tilt and the support hoops were flat on top.

Figure 3. Prototype. Sept. 1947 to Feb. 1948. Basically a Willys Jeep with new body (incorporating many Jeep components) Rover engine, gearbox. Its canvas tilt was a modified Jeep one. Center steering.

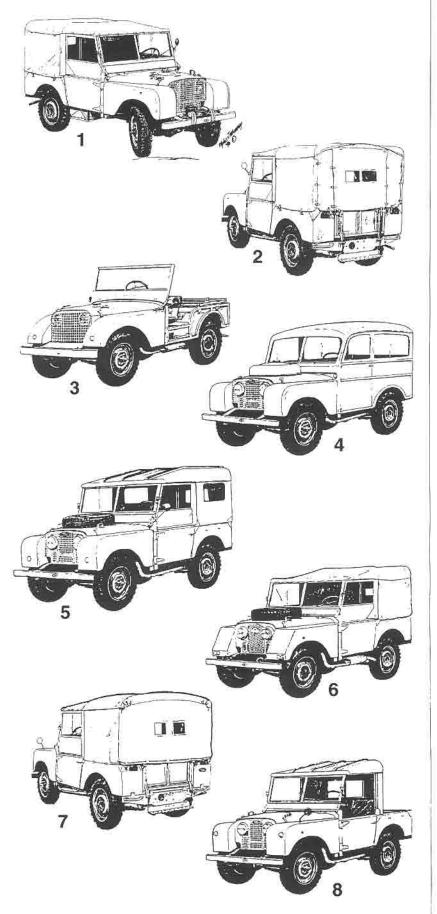
Figure 4. Station Wagon. Dec. 1948 to early 1951. 650 built. Rear body built by another company (Tickfords, who are believed to be responsible for its design and Abbey panels for its construction). Due to British tax laws, this version of the Land Rover cost considerably more than the regular model - one of the main reasons for its lack of success.

Figure 5. The "North American Spec." model. External door handles (mid 1951). Lights protrude through grille (May 1950). Hardtop (Feb. 1950). There is no official record of these vehicles and neither is there an official record of the side light conversion being done at the factory. However, there are stocks - still in existence - of such modified wings. The headlight/grille style on these vehicles ran from May 1950 to August 1951.

Figure 6. Built by the Belgium Company Minerva. Unique in many ways. Body panels of steel. Sloping wings and unique radiator grille. Some Minervas had "normal" wings. Thousands were built and many are still in frontline military service with plenty more in storage - since the early 1950s. The Minerva and German built Tempo 80" will be covered in a future instalment.

Figure 7. Rear view of typical 1950 model. Note raised canvas tilt with curved top hoops instead of the earlier flat type. Rope replaced straps (from June 1949).

Figure 8. Truck cab version (from 1952). Sidelights in standard position on front wings. The inverted "T" wire mesh grille was introduced in August 1951.



hanger. The spring hanger was being welded back onto the chassis by another 'Jeeper' who had stopped and was using his Link-Arc welding equipment.

Kevin was to experience the same fate as I, when he landed heavily on his fuel tank after bouncing over a large rock protrusion. His fuel tank was pushed upwards and a seat frame securing screw pin-pricked his tank on the top. We quickly drained off 20 litres into a Jerry can and continued onto Buck Island. The Jeepers Jamboree had established a repair facility at this picturesque location to

help those that had fallen prey to the rocks. Repairs were effected to the tanks with plastic metal putty and after allowing sufficient time for the putty to set we were on our way again. We set off for the Big Sluice, this and Little Sluice are considered THE challenges on the trail and as Little Sluice was impassable due to flooding we relished the challenge that Big Sluice offered. The sluice is actually a dried up waterfall that features a mildly suicidal descent that makes a 45 degrees turn to the left soon after entry. The margin for error is extremely small and for the less experienced who treated it with scant respect grounded, scraped and bounced their way down this declivity for several hundred metres. We scoured the ground ahead for scrape marks and gouges and proceeded with caution over these areas and reached the bottom of the sluice in style and more importantly without damage. As dusk began to settle we arrived at Rubicon Springs, an oasis amid the rocks and trees, our location for the next two days. A suitable location was found and we claimed it as our camp site despite the lack of tents. After a swim in the springs to refresh ourselves after a strenuous but thoroughly enjoyable days driving it was off to devour the evening meal and quench our thirst.

For those unfortunates that had damaged their vehicles on the route in help was on hand in the "Rubicon Springs Garage." A small but highly skilled group of mechanics had established a garage capable of carrying out minor to major tasks thus enabling Jeepers to drive out on Sunday. The garage was well equipped with tools and essential spares and for those requiring spare parts that were not stocked the helicopter could be hired to fly them in. The mechanics were kept busy during the working hours of Friday and Saturday repairing Jeeps of

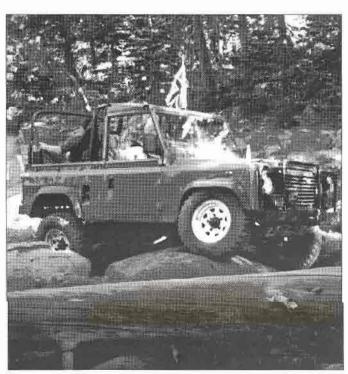
all ages and models. Our Land Rovers had proven to be extremely reliable and resilient and required little maintenance. The installation of the underbody protection plates from Southdown 4x4 Products prevented damage occurring to the steering linkages and more importantly the front diff. casing. Had we only installed the fuel tank guards - hindsight is a fine thing. Around lunch time the three day event Jeepers began to arrive at the springs and we took this opportunity to walk back along the trail and watch them drive the Big Sluice. It was interesting and armusing to watch the differing tactics used to conquer this obstacle. The crews of the vehicles were given vocal encouragement and

guidance by the spectators, not all of which was in their best interests. Most of the thrills were provided by the Jeep dealers that had been flown in from UK by Jeep to participate in this event in standard Jeep YJ's.

While walking to the springs for our morning swim, we were amazed to see the increase in vehicles parked randomly around the area. There seemed to be a vehicle on every piece of flat and level granite slab. During a breakfast conversation with an official it was estimated that there were over 400 vehicles in the area. After breakfast we toured the area to study the vehicles that had driven in during the day/night and early hours of the morning. We spent most



Does it look steep? It is steep.



If you don't think the 90 follows in the Land Rover tradition, check out this axle articulation.

of the day back packing the trails, enjoying the breathtaking scenery and working up an appetite for the "Mountain Man Feast." The feast consisted of steak, corn on the cob, yams and wine. Live country and western music, dancing, a blazing bonfire and a raffle kept most participants partying until the early hours of the morning. We retired to our beds in an attempt to gain as much rest as possible in preparation for our return journey to Winnemucca. Our attempts were foiled by revellers returning to their beds and the background humdrum emanating from the party area.

Our early departure, 0600 Hrs, from the Rubicon Springs was a prudent move as the tailback, witnessed from further along the trail, generated by so many vehicles attempting to depart via the single trail was unbelievable. Cadillac Hill was soon encountered and we waited in the queue of vehicles for our turn. Cadillac Hill was approached via a 90-degree righthand bend at an incline of 35 degrees, this left no room for a run up, thus driver and navigator skills were tested to the full. Both Land Rovers conquered the hill with apparent ease and spectators commented on the low end torque advantage of a diesel and the coil suspension compared to the petrol engined leaf sprung Jeeps. Observation Point was greeted with mixed feelings of elation and disappointment as we knew that we had survived the 'Rubicon' and our homeward journey had begun. We returned to the Elks Lodge and redistributed our belongings among the three vehicles and departed.

We arrived in Suffield at 1600 Hrs on August 2 after having completed a total distance of 5024 Km's during which time the Land Rovers

had performed faultlessly. Throughout this adventure we did not have to top up any of the oils or coolant. This adventure was made possible with sponsorship from the following:

Land Rover UK., Southdown 4x4 Products, Dave Ebels 4x4 Auto Supply Medicine Hat, Form-Tech Machining Ltd. Medicine Hat, Canadian Tire Medicine Hat.

If you are interested in participating in this, possibly one of the last great adventures for 4X4 enthusiasts, there are off road schools in California who will hire you a Jeep for the event.

# General Service Robin Craig

This month we'll take a break from the usual and look at some books available on Land Rovers

For the longest time I have had a healthy disregard for the quickie book reviews that are seen in the likes of LRO and LRW and other 4 X 4 magazines around. For the most part, if you ever compare reviews of the same book, you will find that they are very similar and nearly always not attributed to any one in person. If you have not already worked this one out, it is because they were all written from the same publishers "pumped up" flyer that accompany the book. The following book review hopefully will start to alter this trend.

As a number of you know the military Land Rover is my real passion, hence I feel well qualified to comment on this book.

The names Bob Morrison and James Taylor should by now be known to just about all of your. Bob is a photo journalist specializing in military subjects. For a number of years now he has been Land Rover Owner magazine's military specialist writer. He is also an accomplished author on subjects other than Land Rovers with four non Land Rover books to his credit and a number of others in the pipeline. Land Rover employs him to write the military section of the factory's own publication.

James Taylor is for most people the foremost authority on the Land Rover family of vehicles from the board room to the factory production history. From very early on he has been the mastermind behind the "Land Rover Story" which has become in my opinion some of the most interesting reading in Land Rover Owner magazine. His books on Land Rovers and Range Rovers and Discovery's have become definitive works on the subject.

For a number of years they have both wanted to put together a book solely devoted to the military variants that are in use today. Finally their combined skills have appeared in the form of "Modern Military Land Rovers in colour 197-)1994". Published in hardback by Windrow and Greene, the book is an unusual size of 91/2 inches by 9 1/2 inches. It contains 128 pages full of informative text and colour pictures.

The book offers two views of just about each vehicle that is shown, so by skilful photography, one is given a complete look at each example shown. The accompanying text explains the raison d'etre for each of the types of Land Rover shown and gives good account of the variety of roles the vehicles fill. The use of "fact boxes" and "specification blocks" completes the information in each section.

This book is written in a friendly free flowing manner that is devoid of a lot of "tech-speak" that so many of the specialist books these days are filled with. The military terms that are used are well explained and do not clutter the book. It starts of with the series 3 vehicles and goes right up to present day 90, 110s and 130s. Range Rovers and Discoveries have been deliberately omitted.

The variety of vehicles is well covered. From the immaculately dressed spit and polish ceremonial Land Rovers, to the dented and dust covered everyday military workhorse and just about everything in between. Vehicles built in such far away places as Australia, Turkey, Spain are right in there along side the British built variants. A large number of the pictures are of the vehicles earning their living, hauling men and equipment; towing trailers and artillery pieces.

Included is a look at Land Rovers used by the Royal Ulster Constabulary which is technically a civilian police force but operates in a para military role in Northern Ireland. A number of United Nations vehicles are covered.

In my opinion this is a book well worth spending your hard earned dollars on. The pictures and text compliment each other handsomely. The detail that has been put into this book is typical of the quality I have come to expect from Taylor and Morrison. It covers the subject matter thoroughly and will appeal to anyone who is interested in Land Rovers, military or civilian.

As the title of this book hints, there is more than a likelihood that there will be at least one if not two more books devoted to military Land Rovers by this duo going back in time to 1948.

This book retails in the U.K. for 17.95 Pounds and is readily ordered through most major Canadian book stores by quoting the ISBN 1-85915-026-8 and the title. I would like to point out that this book was provided by the publishers as a review copy.

Recently I received a copy of Land Rover the Unbeatable 4 X 4 by Slavin Mackie and McDine, ISBN # 0-85429-950-5. This is the fourth edition of a book that was once considered a definitive history of Land Rover in many ways when it was first published in 1981. Since then the book has undergone a number of reprints and a number of editions which have also been reprinted as well. This is a hard back book, now published in the UK by Haynes Publishing. The UK list retail is 19.99 pounds, in North America and Canada that price could vary considerably depending on the dollar. It should be noted that Haynes in the US do not handle this book at all, so make no inquires with them, I did and found this out myself.

This book does have some very interesting anecdotes and history of the early Land Rovers. James Taylor has given his input on Range Rover and Discovery history. The information given is good. The same goes for David McDine's part on the military Land Rovers, what is there is worth reading. What I am trying to get at is that there are a large number of big gaps in the book, years go by without any comment, such as in the Range Rover section where a gap from 1984 to 1988 exists. In addition the text in the Range Rover section says that the vehicle has not been taken on board by military customers, yet the military section contradicts this, and we know that they were used

The pictures do not do the subject matter or the occasion justice and the captions contain major errors. Here's an example, page 218 shows what is supposedly a Defender and trailer underslung to a Chinook. Closer inspection of this somewhat dark picture shows leaf springs behind the axle, indicating a series vehicle. Page 215 shows a "Multi Role Combat Vehicle". yet the picture on the next page identifies the same variant as a Special Operations Vehicle which is really what it is. There is mention of the Canadian Discovery launch in May of last year with a photo on page 267, which I happened to have attended. "Attended by HRH the Princess Royal who presented a refurbished Camel trophy Discovery to the Cornell Medical Centre", we are told. Well, the Cornell centre is in the US and I know the Princess was not there, believe me.

This book is getting really tired now, and with numerous segments being parachuted in to add onto the original text it is becoming more and more inaccurate as the original text is being left to stand as was without change. The pictures lack clarity and in a lot of cases are not the best that is around on that subject. From what I can gather this sorry state of affairs is the product of two main causes. Firstly Haynes knows that the book, like a lot of Land Rover related merchandise, sells reasonably well. So they feel an update every five or so years is enough to justify another edition of the book. Secondly the Slavins are really very busy with their own business and from my sources are given a pittance for their work to get each new edition out. As a result the book is loosing credibility over time, and being as this is the fourth edition it needs a real over haul, the original text needs to be gone over with a fine tooth comb and the picture selection requires close attention.

While this book gives a good background on the Land Rover history it is becoming disjointed and flawed. I would suggest that you hang on to your hard earned pennies when you see this one around. There are books that give you a better bang for your hard earned buck. The review copy of this book was kindly provided by Haynes UK.—Robin Craig, rc@fourfold.ocunix.on.c:



# **Tech tips**

# Axle Breathers

# by Steve Tipsword

Tools:

- 15-mm wrench
- bench vise
- solvent and rags
- · emery cloth

### Theory

Any fluid will expand when heated. When the Land Rover is started and operated, the gear lube and the air space inside the differential will expand. If blocked, it will pressurize the differential and attempt to equalize with the outside world by leaking out along the hub seals or pinion seal—or all three. Repair of one leak may lead to a leak at another point

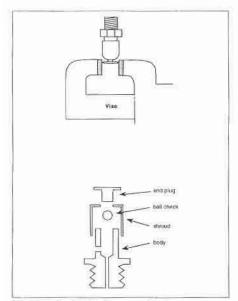


Figure 1. Grip the end plug gently

if no vent path is provided. The axle breather is this controlled vent path. The breather consists of a ball bearing in a brass housing which will allow venting, but limits in-leakage. A shroud fits over the unit to minimize moisture and dirt from entering the side vent. All components are brass except for the steel ball check. A buildup of grease and oil or corrosion of the ball due to prolonged periods without use can block this vent and lead to seal leakage.

### Removal

Wash the immediate area around the breather with solvent to remove any dirt or oil which might enter the axle when the breather is removed. Use the 15-mm wrench to unscrew the breather.

### Inspection

Wash the unit with solvent and dry. The ball check must move freely within the body. If the ball moves freely when the unit is inverted (it has sufficient travel to "click" when it stops), it is okay. Any effort beyond gentle shaking is excessive. Remember that Force = Pressure x Area. Since the surface area of the ball check is significantly smaller than the surface area of the seals, any given differential pressure will exert a much greater force on the seals than on the ball—the result is leakage.

### Overhaul

Grip the end plug (note Fig. 1), not the shroud, in the vise. Be gentle since it is brass and easily damaged. The end plug is press-fitted into the body. Use the 15-mm wrench to rotate the body until the plug can be withdrawn. Retain all pieces (note Fig. 2). Clean all parts in solvent. Any corrosion on the ball check may be removed with careful use of emery cloth. Don't be too aggressive with the paper or you could score the ball check. The ball check may be replaced into the body and freedom of movement verified. Replace the shroud and end plug and gently tap the end plug to a firm fit.

### Replacement

Thread the breather into the axle and tighten with the 15-mm wrench.

### Supplemental

A common problem with overdrive units is persistent oil leakage from the vent hole in the top plate. This is because the vent hole is filled with a cotter pin and, as the overdrive is used, the gears splash oil against the cover and it leaks out. Sandy Grice has proposed a solution which involves (1) removing the top cover, (2) drilling and tapping the cover to accept the axle breather, (3) installing a breather unit, and (4) replacing the top cover. The unit should function as it would for the axles and also prevent direct leakage. As a precaution, if you choose to drill the hole and fasten the breather in place with a nut from below the cover plate, ensure that the nut can't come loose and end up inside the overdrive. One solution would be to tack weld the nut in place.

# 3,333 Mi. Oil Change Interval

If you try to take care of your vehicles and change the oil on a regular basis you might enjoy this little tip that I have been practicing for the last ten years. I used to change oil in my cars every 3,000 miles but it was often confusing when you had multiple vehicles that were all on different intervals and that were being driven varying amounts. With 3,000 mile intervals

your changes are at 3, 6, 9 12, 15, 18, 21, 24,...K miles; all very confusing and hard to keep track of. By simply extending the oil change interval to 3,333 miles and starting at an even 10,000 mile mark your oil changes come up at 13,333, 16,666, & 20,000 miles. The best feature of this system is that you can glance at your odometer at any time to see where you are in the cycle and if you have several cars it is no problem to remember when the next change is due for that particular car. Most manufacturers recommend 5,000 mile change intervals so going to this system means one more oil change in every 10,000 miles and we all know that regular oil changes are the single best thing you can do to extend the life of your car. Now all you have to do is figure out how to get the odometer in the Land Rover to keep working for 10,000 miles; if you can't do that, its back to the old equinox system (once per season).

# Wimpy Axles by Doug Shipman

One of the most common complaints you hear about Land Rovers is that they break axle half shafts. I'm sure we all have stories of either our own or someone we know snapping one. But also it's important to look at all the owners who have never broken an axle. Having been around the vehicles for about 20 years I've seen all sides and, yes, broken a couple myself. I can, however, look at both instances and see why it happened. For those of you that have seen my off-roading you can imagine why. I should say that I have not ever broken one out in the woods. It happens when I get back and I don't take the 15 minutes to check them like I should once a year. They break backing out of the driveway or something silly like that. While some of the concerns are justified, it is more important to look at why it happens. I break down the causes into three areas.

\*Driver—probably the greatest reason, because with good sense you can go indefinitely. I know I'm going to get under the collar of some of you, but I'm sure it won't be the last time. We've all ridden with people who find it impressive to snap your head back with every shift. Well, it's time to wake up! You can drive fast [ed., fast? a Land Rover?] without wearing a neck brace! Practice smooth shifts. It's amazing what proper engine rpm and clutch release can do for your truck, passengers, and you.

•Mechanical—Have you thought about all the components your engine torque goes through to get to the road? Just for the exercise, block your front wheels. Jack one rear tire up to just clear, release the brake and put the tranny in any gear. Now go to the airborne tire and grab it. Twist it back and forth. Surprised? Most people are at the amount of play in everything. Now think for a minute about the weight of the truck working back and forth constantly. I like to use the analogy of a 5-pound hammer and a piece of glass. If you only lift the hammer a few thousandths off the glass and release it, the glass will not break. If you lift the hammer an inch, it will break the glass when it falls. So what's this got to do with your Land Rover? If your clearances are excessive, your axles are not transferring torque in a smooth fashion, but are being hammered constantly. It's important to keep drive train backlash to a minimum—not just for the axles, but for every other drivetrain component, too. Consider the following points to check:

- Clutch. Does your clutch engage smoothly? It all starts here.
- 2) Transmission. Is it staying in gear or popping out?
- Transfer case. Check intermediate shaft end clearance
- 4) Drive shafts, Are U-joints and slop joints in good shape?
- Differential. A major source of free play, mainly the spider gears, but the ring and pinion can do it too
- 6) Drive hubs. Yes, Virginia, those splines do wear out!

We could go into other mechanical problems, but these are the main areas. I know some of you are thinking, boy if I have to go through all that I'm putting a Salisbury in! Well, go ahead, but you are still going to tear up the rest of the truck if the above are not right.

Lastly, the axles themselves—Yes, they are the weak point! But if you just take that short time once

a year to pull them out and check for twisting or wear, you probably will never have one break. This is assuming that you are using quality original Land Rover axles, Personally, it's a lot easier to check the axles once a year than to break a diff or other component because you've put some unbreakable axle in.

What all this is coming down to is the fact that for what the Land Rover was designed to do with the stock engines, the axles are more than adequate. Many are surprised that my V-8 Dormobile has a stock rear end with stock axles. As many of you know, I have pulled my 88 all over and drive off-road often with it and never have broken an axle in it. If you are breaking axles, it's time to look at the above three main categories and rethink your habits. If you must continue on the road you're on, be ready to spend the bucks.

### Editorial- When is a Deal not a Deal?

A while back we asked members to send their parts numbers that cross-reference to parts manufactured by companies other than Rover. The response was good. We were approached by member, Vance Chin, who said that he would organize the numbers for us in a parts catalogue-like format. This sounded great so I, your editor gave Mr. Chin all the numbers our members sent in. Vance assured us that all was going well when we saw him at the British Car Meet in Palo Alto but he wasn't finished. A short while later your editor called to check progress. No one home, so a message was left. Over the course of months since then, we have continued to leave messages by phone, e-mail, postal service (even SASE), and through other members. No response. It is now my opinion that, even though Mr. Chin did the cataloguing, he does not intend to live up to his end of the bargain by sharing the list.

Note: We did manage to get the parts numbers back so all is not lost – just delayed. – ed.

# THE BRITISH NORTHWEST LAND-ROVER CO.

1043 KAISER ROAD S.W., OLYMPIA, WASHINGTON 98502

Specialists exclusively in the restoration of the Land-Rover since 1969.

Fine restored & second hand Land-Rovers

Proper inventory of highest quality spares, accessories and literature.

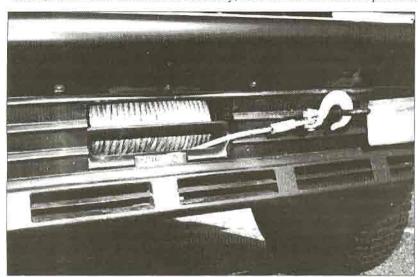
206-866-2254 Sales
206-866-2381 Parts & Service

Catalog & prospective owners kits available.

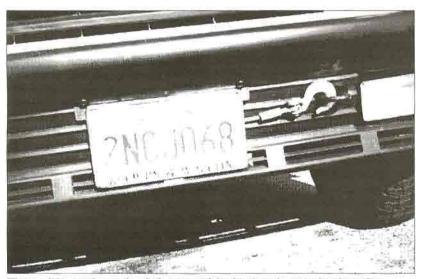
# Front Winch Mountings for Range Rovers

## John Brabyn

Range Roverers wanting the capabilities of a winch, but reluctant to fork over the \$2,300 tariff for the official "Great Divide" bumper/brushbar/ Warn 8,000 lb winch combination accessory, have several alternative options now available in the U.S.



A clean cut in the air-dam provides access to this "hidden" Ramsey 8,000lb. winch.



The cable end can be left out, with the hook attached to the vehicle's factory towing loop.

Similar in concept to the dealer-supplied system, which replaces the standard bumper and airdam, are various Australian "bullbar" winch mounts. Australian ranchers often chase a stray bull in the Rover, bowl it over with the bullbar, then drive up onto it with the front wheels to hold it down. This requires something more stout than the aluminum alloy Great Divide brushbar; the steel ARB bullbar for winches up to 10,000 lb capacity weighs 95 lbs, while the TJM steel bullbar is about 120 lbs. Adding the largest winches can run the total up to 250 lbs; heavy duty road springs are available to compensate. Aluminum bullbars are also available, but most use a heavy steel winch mount insert. (An exception is the 70 lb all-aluminum "Aussie" bullbar).

A second option for winches of 6,000 to 9,000 lbs capacity is known as the "combo" grille guard, brush bar and winch mount, which retains the factory bumper and airdam. These weigh about 70-75 lbs, plus the winch weight of 60 to 95 lbs, for a total of 130-170 lbs. Models are available for Ramsey and Superwinch winches; a discontinued Warn version is available while supplies last.

A third option is the "hidden" mount style with the winch tucked beneath the factory bumper. An economical 35 lb Ramsey kit accommodates the REP series of winches up to 8,000 lbs capacity. More expensive are kits incorporating a Warn 8,000 lb winch mounted in a welded steel box structure. Designed to be covered by the large British-style license plate, these require a wide cutout in the airdam (through which they protrude) and sometimes the bottom of the bumper. Total weight including winch is about 110 lbs.

In choosing between the various options, personal preferences as well as practicality come into play. For frequent winching operations, the "combo" and some bullbar mounts may be preferred for greater accessibility. For occasional duty the lighter, less expensive hidden mount is adequate and avoids the need to lean over protruding bars for maintenance access to the engine bay. Of course, a major factor for many is appearance; some like the rugged looks of the external mounts, while others may find them ostentatious.

For my own first experience in winchery, I was

looking mainly for a safety measure for only occasional (I hoped) use on my often-solo back country trips. Talking to other Range Rover owners with winching experience revealed frustration with inadequate access to the cable drum to view and control spooling. One used a Great Divide mount and found the 1-inch wide cutout in the top of the bumper inadequate for viewing the drum. Another used a box-type hidden mount, and eventually resorted to cutting a hole in the grille! Wishing to avoid these problems, I was also concerned about cost and weight; I wanted to retain the soft stock springs without bottoming out too easily during vigorous trail riding.

I selected a Ramsey 8,000 lb (REP 8000) winch for its lower cost, weight and battery drain compared to the equivalent Warn model. I designed and fabricated a hidden mount using a 24-inch Ramsey mounting channel for a convenient and sturdy base. Supports cut from 3/16-inch steel plate were welded to its front and sides, calculated to resist maximum longitudinal and lateral winching stresses but leave most of the front area open for easy access. The resulting frame was bolted to the chassis forward of the front crossmember but behind the bumper and spoiler, using the bumper attachment bolts as the main supports. Braces extend back to the Panhard rod anchor bolts. The solenoid box was bolted to the chassis rail using another preexisting hole. Total weight of the setup including the winch is only about 90 lbs, a relatively modest addition to the 2,200 lbs already carried by the front springs of an unladen Range Rover.

The front of the winch mount is flush with the ends of the chassis rails, extending about 3 1/2 inches below them. With the spoiler removed for serious four-wheeling, this gives the same angle of approach for surmounting obstacles as the commercial box-type mounts, but the open front design allows a vastly improved degree of accessibility. Nothing protrudes in front of the spoiler, and no cutting of the bumper is required.



The completed installation is hardly noticeable when your Range Rover is out & about.

With the spoiler in position, a cutout, completely concealed by the U.S. - size license plate (removed in seconds by undoing two screws), allows unimpaired access to the fairlead, cable drum and clutch. With the license plate on, there is no visible evidence that your vehicle has a winch, unless you choose to leave the cable end out with the hook attached to the vehicle's factory towing loop. The completed installation is unobtrusive, lightweight, inexpensive, convenient and easy to use. Time will tell whether it does the job!

### Sources

- •Atlantic British, Mechanicville, New York (800) 533-2210 (Combo mount for 6,000 lb Superwinch)
- British Pacific, Burbank, California (800)554-4133 (ARB bullbars)
- Downey Off-Road, Santa Fe Springs, California (310) 949-9494
- (TJM bullbars, heavy duty road springs)
- Land Rover of North America, Lanham, Maryland (301) 731-9040
- (Great Divide winch and brushbar combination)
- Leon Rosser Jeep, Bessemer, Alabama (800) 633-4724 (Ramsey winches and mounting kits)
- Oz Bars, Hillsboro, Oregon (503) 644-1811
- "Aussie" bullbars
- •Ramsey Winch, Tulsa, Oklahoma (918) 438-2760 (Winches, combo and hidden mounting kits)
- •Rovers North, Westford, Vermont (802) 879-0032
- (Box-type hidden mounting kits, ARB bullbars)
  •Warn Industries, Milwaukie, Oregon (503) 659-8750
- (Winches, discontinued combo mounts)
- West Coast British, Livermore, California (510) 606-8301 (Hidden mounting kits, heavy duty road springs)



Extended Service Contracts
For Land Rover Vehicles

# Coverage Up To 7 Years

New and Used Vehicles

Authorized GE and ITT-Automotive Dealer

No Interest Payment Plans Available

Call Jeff Stone (216) 633-0436

The Stan Alan Acceptance Corp.

# **Smog Inspection**

Mike Yee (CA)

For those of us who have to smog our vehicles, here are a few tips. First, any motor should be able to pass smog if it is in good mechanical working order, even without the smog equipment.

Tune it up, as this is very important. A guy in a shop told me that retarding the timing a bit and adjusting the valves loose about .002 inch helps. But reset this after the smog check.

Change the oil and filter. Some oil will be burned in the combustion process and the clean oil will burn cleaner than dirty oil.

Make sure your motor is hot before smogging as the hotter motor makes for a more complete combustion. It may be necessary to block the air flow off to the radiator a bit.

Run your tank almost empty and put in a gallon or so of methanol (methyl alcohol). This burns clean. Methanol can be purchased at any chemical supply outlet.

Now if your Rover doesn't run on petrol, it must run on store oil, right? There are two types of diesel fuel: diesel #1 and diesel #2. Diesel #2 is used the most. Diesel #1 is a winter-grade fuel. It is or can be a blend of diesel #2 and up to 30-35% kerosene. This helps prevent gelling or waxing, therefor reduces the pour point. What this means is that it is a lighter fuel and should reduce emissions a bit. If you need to blend your own, remember one thing: 30-35% kerosene and the remainder is safe for your motor. This is what a lot of refineries blend their #1 diesel at. What I mean by safe is that your engine's injection pump and injector



need oil for lubrication, so don't cut it with too much kerosene. I have heard that too much kerosene and it won't have enough BTU value to keep a motor running.

By the way, a cheap injector cleaner is automatic transmission fluid. A quart in a tank ever so often should keep them clean.

When it gets cold I recommend a product called Polar Power. It is an anti-gel additive. It's expensive—about \$8-\$10 per 16 oz. bottle—but it works. A friend used another brand when it was -25° to -35°. He and another fellow jelled up. My fuel treated with Polar Power didn't. As a matter of fact, someone I know works at Big D International and sells Polar Power. He said a lot of truckers buy it and accept no substitutes.

# **Axles**

# Fritz Radicchi, CA

"Axles? Axles?! We don't break no stinkin' axles!"

That was the joke my friend Doug and I told each other, after we had broken the first of many on his SIII 88.

I have never broken a Land Rover axle, personally. I've been in Land Rovers when axles were broken, but never as the driver. I didn't even know about the problem until years after I'd sold my first 88.

I'd been talking up Rovers to my friend, and one day we found one, parked on a used car dealer's lot in Eureka. Into the lot we pulled, to check it over. Could we go for a test drive? Had we a license? You bet! Boy, the interior of that SIII was sure luxurious, compared to my old SIIA! And wipers mounted on the bottom of the screen, and driven together! Boy, what a concept!

The salesman turned us loose, by ourselves(!), and we headed off into the hills that surround the town. Not having been off-road in that area before, we finally found a cleared construction site and locked in the hubs and pulled back for low range. Squashing through the ruts leading to the level portion reminded me to tell Doug to keep his thumbs free of the spokes. You all know why! After about 1/2 an hour, we couldn't get it stuck, so back to town (and a carwash!) we went.

I had (and still have) an old issue of "Off-Road Australia" which has an article in it about "How to check a Land Rover", which we brought along to the dealer the next day. Compression test, steering relay, swivel balls, u/j's, oil, water, plug condition, lights (they all worked!), etc. We went over that truck with gusto! After suitable negotiations, it became Doug's.

And that day, up the road from our place, climbing a steep slope, we broke an axle. Bunny-hopping, like you see on those Moab off-road videos, did not work for us. Luckily, a 2 minute drive home, and we could start to figure out what went wrong. The driveshaft turns, but the axles don't! By now, I was feeling quite responsible for my friend's misfortune, even though I hadn't been driving. Under the truck we went, unbolting parts, until finally the diff was free!

One thing I did know about Rovers was that parts were not easy to come by. There was supposedly a dedicated Rover parts outlet somewhere in Northern California. Digging through my old issues of R&T or C&D or Off-Road, I came up with ABP in Lewiston, Calif. What luck! Probably only 2 hours away! Off to ABP, with cash in hand, to secure a pair of axles. After all, if one goes, can the other be far behind?

I can recall being very impressed with ABP's shop. They had more Land Rovers in one place than I had ever seen before! And one had Alaska plates! Too cool! And those guys knew Rovers. After ogling their parts and vehicles and buying some books, we left.

Fixing Doug's truck was the first time I realized that there might be a chink in Rover's armor. I had never broken an axle, even in the most arduous off-roading I'd done in Colorado. Later that year, we broke an axle at a stop light, and another in Canada, but that's a story for another time. Later-Fritz.

# Marketplace

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

Please limit your vehicle ad to 7 lines. No business ads please. Ads with \* ran in the last issue also.

### **VEHICLES**

'69 88. Series IIA Station Wagon. 2.25 petrol, overdrive. Excellent running cond. Very nice black/creme interior with rear side seats. No rust, body straight, could use exterior paint (flaking). 95,000 original miles. Must sell. \$5,000. 503-755-0929 (OR).

'66 109 IIA 5-door Wagon. Tropical top, 2.25 petrol, current license. Runs solid. California vehicle. Excellent to restore. \$5,800 obo. Mike, 916-363-3211, Sacramento (CA).

'57 Series I Long Bed pickup. Near total restoration with original parts. New paint, exhaust, brakes, gas tank, wiring, bumper, seats, panel, glass. Runs great. \$10,000 obo. 801-783-5778 (UT)

'64 Series II 109 2-door. Rear tailgate & hatch. 2.25 petrol. Newly covered seats, much recent work. Needs paint.. \$5,000 obo. Eric, 510-827-1994 (CA).

'53 Series I 107 pickup, LHD. Very original. Great frame. On page 112 of July '94 LRO. \$6,000.

Also, '64 Series II ex-military 88. RHD. Dual tanks, overdrive, roll bar, side steps. \$4,300. 206-528-0870 (WA)

'69 IIA 88. 2.25 petrol. New rewire, brakes 5 16" tires, footwells, trans crossmember, clutch & master cyls. Good frame. Over \$6,000 invested. Must sell ASAP. \$5,500. 908-638-4618. John (PA/NJ)

'64 88, NOS 215cid V-8 with automatic on new heavy duty frame. Completely rebuilt. Fresh paint, new exhaust. Full 4WD & hubs. Was building as my serious off-road toy but switched to coil-sprung chassis. Drive away as is, \$7,500. Finished, \$10,000. Will sell drive train or chassis separately.

Manifestation of Murphy's Law: When John doesn't have an automatic Rover for sale he gets a call every month. When he has one...

Call John at 201-445-0361 6am-9pm (NJ)

'57 Series I. No rust but needs much work. \$1,000 obo.

Also '73 88 Series III. Some parts missing, \$3,000 obo. Gene 408-338-4758 (CA).

\*1967 109 Station Wagon. 6 cyl., tropical hard top, new brakes, electrical, exhaust. Straight body, good chassis. Some rust on Tframes only. Hardship. Must sell. \$4,200.

Call Gerald at 503-755-0929 (OR).

\*127" for sale. Rear ambulance bed removed – flatbed. Front cab still on. Call Robin at 613-738-7880 (Ontario).

'61 Dormobile, 4 cyl., RHD. Great condition. Ready for anything. Sleeps 4. Sink, stove, 7'8" headroom. Blue. Quite rare – 150 ever made.

\*Also '67 Dormobile 6 cyl., RHD. Very good cond. New carb, radials. 4 person model. Gray. Runs & drives perfectly. Needs some cosmetics to be great. Call Mike for details. 207-236-8162 or fax 207-236-8169 (ME).

\*'67 Dormobile. 6 cyl., RHD. Excellent condition. \$10.00.

'65 Ex-Military 3-door hardtop 88. With extras.

'66 Civil 88. Safari Roof. Price on request. Phone 207-236-8162 or fax 207-236-8169 (ME).

### **PARTS**

Rebuilt Perkins 4-203 diesel engine complete with LR adapter kit. Great power & torque plus 30-35 mpg. Easy installation. \$2,000. 88 drum to drum front & rear axles. 4.7 gears. \$1,000, both. 88 drum to drum front & rear axles. 3.5 RR gears. \$1,200, both. 109 drum to drum front & rear axles. 3.5 RR gears. \$1,500, both. Good 109 chassis w/ rear axle housing & rear wheels, \$500. Good IIA trans w/ transfer box and Fairey overdrive, \$1,000. 3 series IIA transmissions w/ transfer boxes, 1 good, 2 need work, \$1,000 all 3. Will sell entire package for \$5,000. Oliver, 714-644-2488.

Range Rover and Land Rover Parts. 1966 LR Station Wagon: frame, front end, rear end, engine, transmission, transfer. 1984 Range Rover: 3-speed auto trans, transfer case. 1988 Range Rover: Complete Flengine, misc. parts. Call 801-399-4649 '91 Range Rover Parts: Waterproof seat covers, Rubber floormat set, Dog guard with gun rack, ARB winch bumper, Bilsien shocksfront, Bilstien shocks- rear, XD9000i Warn winch, Old Man Emu suspension- 4 coil springs & 4 gas shocks, styled wheels with BFG Mud Terrain tires, Transfer case skid plate, Under-hood HD rocker panels. Call John at 507-334-5737 (MN)

Warn winch, 12 volt, mounted on LR bumper. With roller fairlead & remote control. Very good cond. \$550. Warn snatch block, never used, \$40. Tow rings, \$20.

Military Soft top and hoop set. Very good cond. \$475.750x16 tubes (4) very good cond. \$20 Tom, 203-496-8542 (CT).

### WANTED

109 2-door in good condition. \$3,000-\$5,000. Joe, 316-327-8211 (KS)

Sills for 109 (5"). I have many that measure 29" (exposed upper edge) but need the ones that measure 26 3/4". John, 201-445-0361 (NJ)

'Four Wheels for '89 Range Rover, Jim, (703) 967-2298) (VA).

# INCLUDE PHOTO FOR JUST \$10

Just write out your ad (we prefer 7 lines or less), put it and your photo in an envelope with a check for \$10 to emu design, PO Box 872, Concord, CA 94522. We will take your photo, and include it with your ad copy. It will run for the usual 2 issues unless you renew it or cancel.

### Rover Parts and Service

We don't necessarily endorse these businesses. Please help us keep this list updated.

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

4 Wheelin America 2134 S Humboldt Denver, CO 80210-4619 303-778-9144

The 4x4 Experience 15 Brucedale Ave. East Hamilton, Ontario Canada L9A 1M9 416-383-8785

Alan Christian Motor Car Holland, MI 616-396-2014 \*SV

Andre Maier Surrey, BC, Canada 604-599-4169 \*S \*RS

Arlington Motorcar Service 1712 Wilson Blvd. Arlington, VA 22209 703-276-8022. \*SV \*B

Atlantic British Parts P.O. Box 110, Rover Ridge Dr. Mechanicville, NY 12118 800-533-2210 "P-UP-R 518-664-6169 FAX 518-864-6641

Atlantic British Parts, Canada P.O. Box 1068 Waterloo Quebec, Canada, JOE-2NO 514-539-2669 'P 'UP 'R 800-32ROVER

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

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

Auto Electrica New York, NY 908-691-2020

Autofirme Rawling, NY 914-855-0170

Automobile Repair Saratoga Springs, NY 518-581-1562 \*SV

Auto Service & Body Boone, NC 704-264-6660

Autosport Bridgeport, CT 203-364-5722 \*SV

Badger Interior Coachworks 259 Great Western Rd. S. Dennis, MA 02660 508-394-2680

Bakke Imports San Antonio, TX 512-344-3669 \*SV

Big Bear Auto Repair Big Bear Lake, CA 909-866-2336 Bob's Auto Service Huntington Valley, PA 215-364-0606 \*SV

British American Car Service 426 25th St. Oakland, CA 94612 510-452-4322

British Auto Services Portland, OR 503-221-1700 \*SV

British Car Service Eureka, CA 707-455-8849

British European Car Service Salt Lake City, UT 801-405-6568 \*SV

British N. W. Land-Rover Co. 1043 Kaiser Rd., S.W. Olympia, WA 98512 206-866-2381 (service) 206-866-2254 (parts) "P."UP."SV."S."RS."F."R

British Pacific 3317 Burton Ave. Burbank, CA 91504 800-554-4133 \*P \*UP

Campart Distributors, Ltd 221 41st Ave N.E. Calgary, Alberta, Canada TZE 2N4 403-276 2211 800-661-8347

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

Cheshire Foreign Auto Service 441 E, Main St. Marlboro, NH 03455 603-876-4613 \*S \*SV \*RS

Chris' Auto Service Ltd. 12508 125th St. Edmonton, Alta, Canada TSL 0T3 403-455-2404

Classic Rover, The 125 S. Main St. Woodbury, CT 06798 203-263-2815 \*S \*RS \*SV \*P

Creed Evans P.O. Box 1542 Great Falls, MT 59403

Coastal Imports 422 West 21st St. Norfolk, VA 23517 804-627-4630 \*S \*RS \*SV \*F \*UP

D.A.P. Enterprises Springfield, VT 802-885-6660 \*P\*UP\*SV \*S\*F\*R\*RS FAX 508-295-8002

Dearing Auto Tucson, AZ 602-798-1222 Dixieland Rovers Rte. 3, Box 358 Tifton, GA 31794 912-386 8498 \*SV \*F

Donovan's Jaguar Service Lenox Dale, MA 413-637-4425 'SV

Don's Import Auto Service Vero Beach, FL 407-569-4714 \*SV

East Coast Rover Co. 50 Harden Ave. Camden, ME 04843 207-236-8162 FAX 207-236-8169 \*UP \*S \*F \*SV \*RS

East Hampton Class East Hampton, NY 516-324-5845 \*SV

Emby Motors State College, PA 814-238-3555 \*SV

Ernest Klopping Hyde Park, NY 914-266-5025 \*SV

Felman Brothers Auto Syracuse, NY 315-463-5688 \*SV

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

Foreign Auto Wayne, NJ 203-694-0034

Foreign Auto Engineering Rowley, MA 508-948-7696

Four Oaks Garage 1547 7th St Santa Monica, CA 90401 310-451-2226

Garrison Texaco Garrison, NY 914-424-3166 \*SV

General Import Service Roanoke, VA 703-772-9486 \*SV

Grandview Imported Nyack, NY 914-358-6886

Great Basin Rovers 342 W. 1700 S. Salt Lake City, UT 84115 801-486-5049 \*P \*UP \*SV \*R

Green Hill Automotive Green Hill Rd. Barington, NH 03825 603-332-8443 \*SV \*RS

Hardie Auto Service Vero Beach, FL 407-778-2623 Harrell Motor Sales Waynesville, NC 704-456-8603 \*SV

Hartley Auto Service Cortland, NY 607-753-6199 \*SV

Helm Automotive 69 E. Lewelling Blvd. San Lorenzo, CA 94580 510-278-6887

Howard's Garage Vaughn's Neck Rd. Warren, ME 04864 207-273-2370 \*S \*SV \*RS

Huntspoint Auto Bronx, NY 800-221-8151

Hyder's Safety Service Westfield, MA 413-568-4414

Import Auto Service San Antonio, TX 210-666-4825

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

Inland Rovers 553 Site 19 Comp 77 Cranbrook B.C. VIC 6H3 Canada 604 489-5859

Jag Shop, The Myrtle Beach, SC 803-626-4625 \*SV

Jaguar Service Tulsa, OK 918-664-4206

John's British Car Reno, NV 702-323-7767

J. E. Robinson Indian Orchard, MA 413-543-6843 \*SV

Kane Motor Car North Kingstown, Ri 401-294-4634 \*SV

Land Rover Enterprises 702 South 24th Ave. Yakima, WA 98902 509-453-8580

LIC Auto Imports, Inc Astoria, NY 718-932-6003

McAllen Imported Car Center McAllen, TX 210-682-2145 \*SV

Mid-American Rovers 10708 College Ave. Kansas City, MO 64137 816-763-3797 M.O.R.E. RR1 Kingston, NS Canada

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

Octopus Parts 3396 Marine Dr. W. Vancouver, BC Canada V7V 1M9 604-925-1514 \*P \*UP \*S

Old Wick Village Garage Oldwick, NJ 908-439-2336 \*SV

Page Automotive Green Bay, WI 414-496-0496 \*SV

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

Paul's Mobile Service Manchester Center, VT 802-362-3058

Passport Foreign Car Piscataway, NJ 908-469-0738

P J Foreign Car, Inc. Hutchinson, MN 612-587-5558 \*SV

Prestige Auto Service Fort Lauderdale, FL 305-760-4444 \*SV

Prestige Motor Club Long Island City, NY 718-937-6262 \*SV

Prestige Motors Madison Heights, MI 313-585-9730 \*SV

Ramones Jaguar Shop Villa Capar Guaynabo, PR 800-781-8554

RC Repair 526 Doremus Ave. Glen Rock, NJ 07452 201-445-0361 \*SV \*F

Red Line Engine Repair Canaan, NY 518-781-4670

Rensport Auto Bedford Hills, NY 914-241-3338 \*SV

R. J. Scott Frame Restorations South Langley, BC Canada 604-533-4378

Rocky Mountain Rovers 731 51st Ave., S.W. Calgary, Alberta, Canada 403-253-7977 Rogers Garage/LR Service Hampden, ME 207-862-3428 \*SV

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

Rovers West 4060 E. Michigan Ave. Tuscon, AZ 602-748-8115 \*P \*UP \*SV

Roverworks Box 307, Ruskey Ln. RR1, Hyde Park, NY 12538 800-999-6402 914-266-5025

Rover Works, Canada Site 72, RR #2, Box 16 Summerland, BC Canada VOH 1Z0 \*S \*SV \*F \*P \*UP \*RS

Rover Works, The 8788 Baltimore National Pike Ellicot City, MD 21043 410-461-7162 \*S \*SV \*P \*RS

Ship's Mechanical Services, Inc. 12755 NE Whitaker Way Portland, OR 97230 503-252-5566

Stevenson's Import Bethel CT 203-744-3420

St. Foreign Auto Parts Syracuse, NY 315-478-2161 \*P \*SV

Ted Howard Warren, ME 207-273-2370

Tepas Auto Buffalo, NY 716-826-6666 'SV

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

U.K. Trek And Traction Parts, Ltd. 105-20577 #10 Highway Langley, BC Canada V3A 5E8 604-534-6971

Utica Lincoln Garage Utica, NY 315-735-5251 \*SV

Walter Miller Auto Literature 6710 Brooklawn Parkway Syracuse, NY 13211 315-432-8282

West Coast British 190 Airway Blvd. Livermore, CA 94550 510-606-8301 \*P\*UP\*SV

Westport Getty Westport, CT 203-227-8244 \*SV

Winning Makes Santa Barbara, CA 805-963-3114 \*SV

### Land Rover Clubs In North America

These are clubs you may be interested in joining. Please help us keep it up to date.

Bay State Rover Owner Assoc. PO Box 342 North Scituate, MA 02060 USA Attn.: Jim Pappas

Blue Ridge Land Rover Club PO Box 507 Parkersburg, WV 26102-0507 USA

Attn.: Cheryl Ritchie Ph. 304-422-0531

Canadian Series 1 Club RR S Bracebridge, Ontario P1L 1X3 Canada Attn.: Dave Davey Ph. 705-639-2518

Dormobile Owners' Club 50 Hardin Ave. Camden, ME 04843 USA Attn: Mike Smith 207-236-8162 Flatland RoverSociety 16007 W. 82nd Pl. Lenexa, KS 66219 USA Steve Paustian 913-541-0575

Island Rovers 2685 Otter Point Rd. RR2, Sooke, BC VOS 1NO Canada Attn.: Ron Low

Land Rover Annual Picnic Club 8 South 18th Ave. West Duluth, MN 55806 USA

Land Rover Club of Florida 3324 Pine Hill Trail Palm Beach Gardens, FL 33418 USA Tom La Manna 1-407-627-8752 Land Rover Owners' Assoc. North America PO Box 1144 Paradise, CA 95967

Land Rover Owners' Assoc. of Manitoba PO Box 331 Powerview, Manitoba ROE 1PO Canada

Land Rover Register of Alberta PO Box 1299 Gibbons, Alberta TOA 1N0 Canada

Land Rover Register of Canada 945 Marine Dr. #311 West Vancouver, BC V7T 1A8 Mantime Org. of Rover Enthusiasts RR1 Kingston, Nova Scotla

BOP 1R0 Canada Attn.: John Cranfield

Attn.: Kevin Burton

Newfoundland Rover Register #2 Holden St. Mt. Pearl, Newfoundland A 3H4 Canada

Northwoods Rover Group 2547 152nd Ln. NE Hamm Lake, MN 55304 USA Attn.; Bill Osterheim

Ottawa Valley Land Rovers 1016 Normandy Crescent Ottawa, Ontario, Canada K2C 0L4 Atn.: Mike McDermott Ph. 613-24-8300 Pacific Coast Rover Club 10537 Interlake Ave N. Seattle: WA 98133 USA Gord'n Perrott, Secretary 1-206-361-5766

Rover Car Club of British Columbia 2671 Sechelt Dr. North Vancouver, BC

Canada Rover Owners' Assoc. of Michigan 5260 Textile Rd.

V7L 1N9

Saline, MI 48176 USA John Russell 313-429-3485

Rover Owners' Assoc of Virginia 1633 Melrose Parkway Norfolk, VA 23508-1730 USA Attn.: Sandy Grice Royal Range Rover Society PO Box 1363 Paramus, NJ 07653-1363

Solihull Society Box 916 Monument, CO 80132 USA

Toronto Area Rover Clubs 47 Squires Ave Toronto, Ontario M4B 2R4 Canada Attn.: Torn Tollefson Ph. 416-825-8062

Yankee Rovers 1006 Goshen hill Rd. Lebanon CT 06249 USA Attn: David Ducat 203-642-6903

# Land Rover Owners' Association, North America Regional Coordinators

N. CENTRAL

Peter Donnely

708-831-2208

1271 Taylor

BLUE RIDGE Cheryl Ritchie/ Steve Tipsworth PO Box 507 Parkersburg, WV 26102-0507 304-422-0531 (Cheryl) MOUNTAIN STATES Bill Davis/Kerry Oldham 3423 Island Way Salt Lake City, UT 84120 801-966-4119 (Bill) 801-768-8810 (Kerry)

NEVADA Jeff Stitt 230 N. Mt. View Yerington, NV 89447 702-463-2011 m 120

> N. GEORGIA Jack Walter 1325 North Point Way Roswell, GA 30075 404-641-0147

Highland Park, IL 60035

NORTHWOODS Bill Osterheim 2547 152nd Ln. NE: Ham Lake, MN 55304 612-434-8144

OREGON Doug Shipman 945 NE. 188th Portland, OR 97230 503-661-5123 S GEORGIA Steve Johnson Rte. 3, Box 358 Tifton, GA 31794 912-386-8498

Johnson Chuck Willis
, Box 358 1121 Forrest Dr.
GA 31794 Arlington, TX 76012
86-8498 817-461-9280
WASHINGTON

WASHINGTON Gord'n Perrott 10537 Interlake Ave. N. Seattle, WA 98133 206-361-5766

TEXAS

### APPLICATION FOR MEMBERSHIP

Membership dues are \$20/ year for U. S. residents. Canada & Mexico, please add \$4. All other countries add \$6 for mailing. Please remit in U.S. funds payable to LROA. Thank you.

Send to: LROA MEMBERSHIP, P.O. Box 1144, PARADISE, CA 95967

DATE	ROVER INFORMATION		
NEW MEMBERRENEWAL	YEAR	PETROLDIESEL	
NAME(S)	MODEL	LIC#	
	ORIGINAL	MODIFIED	
ADDRESS	EXTRAS		
CITY / STATE / ZIP	·		
PHONE ()	-		
OCCUPATION(S)	OTHER		

### MOVING?

If you move, send this information in to us.

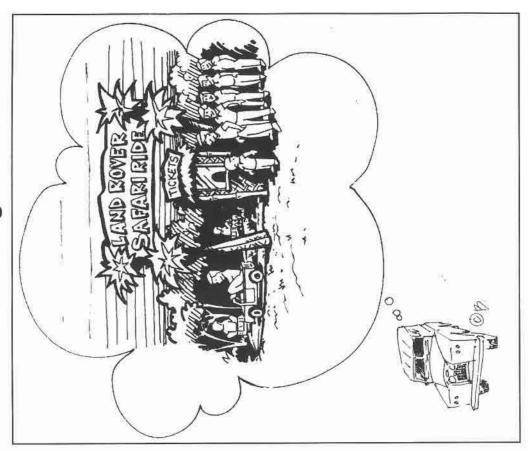
The Postal Service will not forward bulk mail items unless you make a written request.

NAME	MEMBER #			
OLD ADDRESS	CITY	ST	ZIP	
NEW ADDRESS	CITY	ST	ZIP	
EFFECTIVE DATE	NEW PHONE #			

SEND TO: LROA MEMBERSHIP, P.O. Box 1144, PARADISE, CA 95967

by Brad Blevins

Wishful Thinking



THE ALUMINUM WORKHORSE LAND ROVER OWNERS' ASSOCIATION, N.A. PO BOX 872 CONCORD, CA 94522

**Address Correction Requested** 

Bulk Rate
U.S. Postage
PAID
Concord, California
Permit
#575