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www.ovlr.org

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PO Box 36055, 1318 Wellington Street, Ottawa, Ontario, CANADA KIY 4V3

## **General Information**

**Ottawa Valley Land Rovers** is the oldest and largest Land Rover club in Canada. Membership is open to all Land Rover enthusiasts. Executive meetings are held on the first Monday of every month. Social meetings are held on the third Monday of every month, generally at the Prescott Hotel on Preston Street.

**OVLR** offers a monthly newsletter and a variety of activities throughout the year, from mechanical seminars and off-road rallies to social events and family oriented outings. Members receive discounts on parts from a number of North American suppliers. Off-road activities come in several categories. The light version, which is usually entertainment during a rally or at one of our family summer events, consists of a little "mud bogging" or tours along country lanes. The heavy stuff, which is usually several days across public lands navigating by compass, topographical maps and aerial photos, involves bridge building, river barging, and driving conditions ranging from cedar swamp to rocky hill winching.

**Membership:** Canadians joining throughout the year pay CD\$30 per year, Americans and others pay US\$25 per year. membership is valid for one year.

## The Ottawa Valley Land Rovers Newsletter

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is published twelve times per year for club members. The editor welcomes submissions of text and photographs for publication.

**Submissions:** Articles may be submitted to the Editor, Dixon Kenner (dkenner@fourfold.org) or via post, to the club address. Photographs should be sent directly to Spencer Norcross at 1631 N. Barton Street, Arlington, VA 22201, USA. Please include captions and a return address with photographs.

**Deadlines:** Submissions to the OVLR Newsletter must be received by the first of every month for inclusion in that month's newsletter. All items submitted for publication should be legible and signed. Names maybe withheld at the request of the writer. This is your newsletter. If you wish to write anything, we welcome your input of any kind.

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# The OVLR Newsletter

#### **EDITOR:**

Dixon Kenner (dkenner@fourfold.org) (h) 613-722-1336

#### **PRODUCTION EDITOR:**

Spencer Norcross (spenny@fourfold.org) (h) 703-516-9899 (w) 703-243-3733

#### **CONTRIBUTORS:**

An all-star cast featuring Mike Rooth

#### **OTHER HELP:**

the usual suspects...

# The OVLR Executive:

President Fred Joyce (613 833-0615) or president@ovlr.org

Secretary-Treasurer Dave Meadows (613-599-8746) or secretary@ovlr.org

Events Co-ordinator Christine Rose (613-823-3150) or events@ovlr.org

Off-road Co-ordinator Jason Dowell off-road@ovlr.org

Exec member at-large Keith Elliot

(613-835-3934) or at-large@ovlr.org

Past President

Andrew Finlayson **Merchandising Co-ordinators** Christine Rose & Andrew Finlayson

Membership Secretary: Rob Ferguson

> Returning Officer Murray Jackson

> > Auditor Fred Joyce

**Archivist** Andrew Finlayson

**Marshal** Murray Jackson

OVLR Radio Frequencies:

VHF: 146.520 CB Radio: Channel 1 FRS: Channel 1 sub 5 Shortwave: 14.160Mhz More details regarding Land Rover events can be found at: http://www.ovlr.org/Events.other.html

> Land-Rover FAQ: http://www.fourfold.org/LR\_FAQ/ OVLR/Land Rover HAM: 14.160Mhz @ 01:00GMT Tuesdays

# Greetings;

Well, the event for May was the Maple Syrup Rally, but sadly the article on a very successful days seems to have gone astry. However, some sixty five people showed up at Vern Fairhead's farm in Shawville Quebec for the traditional meal of french toast, homemade maple syrup and Grandma Louise's baked beans. After the meal, quite a large convoy of vehicles set off into the forests surrounding Vern's farm, and I hear had quite a time out there.

In other news, Fred Joyce resigned as President of OVLR. For the time being, the position of President is being held collectively by the balance of the Executive. More for the reason that we don't want to make it appear that Andrew Finlayson can't escape a position that he has done so well in the past!

Maple Syrup Rally Volunteers:

Merchandise/Money/Registration: Joyce Meadows Food: Grandma Louise's famous baked beans. Kitchen/Cooking: Peter & Donna Gaby, Delia Coates, Andrew Finlayson, Roy Bailie, Dave Meadows, Ray White, a non-member guest helper

Cleaning: Fred Joyce, Dave Meadows, Ron Tompkins, Roy Bailie, B. Martin Trailer packing: Francois Juneau, Roy Bailie, Harold Friese, Fred Joyce, Andrew Finlayson, Dixon Kenner Trailer towing: Jason Dowell Other Rally trivia: Approximately sixty five people.

Approximately thirty vehicles (4xSIII, 1xD90, 2xD110, 3x109, 3xRR, 6xDisco, 1x88, + 11 other marques)

Greatest distance travelled: Ron Tomkins (& friends) from New York City



From the Editor: Yes, slightly late on cause to language training, but more becasuse I was awaiting an article on the Maple Syrup Rally. No matter, a full account will wind its way towards your mailbox eventually! As per the last newsletter, that was put together by a number of the usual suspects who handled the entire printing, collation, stuffing, and mailing when I was suddenly called away from Ottawa for various reasons. Dale Desprey did an excellent job organising the printing and getting the collation/stuffing crew in place. The rest of the work was carried out by Bruce Ricker, Fred Joyce, Murray Jackson, Shannon Lee Mannion, Ted and Christine Rose and I believe I am missing someone.

To reward Dale for his efforts, we have bestowed upon him some new responsibilities. Dale will be taking over from Spencer all of the responsibilities that go with photographs for the newsletter. Dale will be receiving and scanning photos for Spencer, and gathering up any scanned images for transmission down to Spencer. Send any material to Dale at 432 Mansfield Avenue, Ottawa, Ontario, K2A 2S7.

A note from Mike Loiodice: "Seems like everyone around here is either getting married or buying a Range Rover. I've been married before. So, I bought a Range Rover. 1989, white. one owner. a bit rusty around the liftgate (its so bad it won't latch) but I've got a useable replacement. The tailgate may also get replaced. Passenger side floor is weak. Truck has been sitting for two years and the oil pump has lost its prime. But it runs. OK. sitting down Al? Real cheap! (Your truck was much nicer!)

A note from Jon Humphrey: "It is officially here at 4:30 this am... Got over to Marks about 1:30 this afternoon....Sunday April 1, 2001 1958 Series 1... It is sitting in the driveway with the bonnet open and the top off and the doors off... Runs beautiful but has no brakes because of the master cylinder... All brand new wheel cyl, brake drums, brake shoes... We took the cv master cylinder from the Jim Carey rover and adapted it...lookin good so far... Try to pump and bleed... no good...Puzzle? puzzle? Tear the MC back out and check it out... Someone had put in regular brake fluid and the front and rear seals are swollen to twice normal size. Find kit for clutch MC in house and they are the same as what we need... Install in MC. Install MC in car. 20 pumps later we have brakes...

Then we ride over the neighbors back yard down past his fence and up the next street we wave and comment to the other neighbors as we ride past with 7 of us in the Series One Then we ride back over the neighbors yard and up the steep hill and then back over the neighbors yard. and back agin up the hill Then over the wall and come to a screeching halt Thanks to

# This Month's Cover:

the new brakes Seven of us pile out of the series one... Grinnin an smiles, Jon n Buddzo

📭 A Koenig winch update from Martin Rothman

Hi all, I have been busy working away on my ex-Willis Jeep Koenig winch, adapting it to my S1-80". This winch is somewhat different than the LR specific, crank drive Koenig winch, although it looks almost the same. The mount points are at the centerline of the winch drum, rather than the base of the clutch case as in the LR version. Also, it doesn't have the chain drive-transfer case with dog clutch assembly to connect to the LR crankshaft. Instead, the winch input driveshaft extends 2" out from the back of the winch, through a cast aluminum mounting plate. Originally, a PTO driven driveshaft connected direcly to this input shaft. On the other side of the winch drum, the support casting is much shallower than the LR version (similar to the Koenig LR PTO winch).

First I had to determine how to drive the winch. I looked into building my own crank drive assembly, AKA the Koenig LR winch. That is, until I borrowed an actual Koenig LR crank drive winch from Dixon Kenner and took apart the chain case to see what was inside to engage and disengage it from the LR crankshaft.

It has what is known as a dog clutch engage/release mechanism. For and that don't know, this is a mechanical affair that consists of two major parts, a driveshaft with two arms sticking out that spin like the blades of a lawnmower, and a transfer shaft with two forks. The transfer shaft rides on the driveshaft and is slid into the driveshaft arms so that the forks engage the arms, driving the winch.(clear as mud, eh?) It is pulled back to release the winch.

This is a BRUTAL affair that doesn't deserve the name "clutch". Engaging the clutch while the engine is running puts untold impact load on the crankshaft. I have heard horror stories of broken cranks caused by owners banging the clutch into and out of drive mode, although I don't any first hand knowlege myself.

Thus I decided to look for another way to drive the winch. OK, PTO? Well, on an 80" it is almost impossible to route the various driveshafts to the winch. Just not enough room. If I had a RH drive 80" I might have been able to do it, but not with the pitman arm on the LH side. I also thought about adapting a motorcycle clutch to the winch and driving it from the crankshaft. A bit too much effort to do all the machining to adapt it, and what about keeping it clean in the mud? Got to be another solution.

At this point one of my friends suggested that I drive it hydraulically like the LR S11 factory hyd winch. My response was "What factory LR S11 hyd winch?" Now, you have to remember that I have some serious gaps in my LR knowledge. If it was made after 1958, I have little knowledge of it. In fact, I have only owned one LR and that is my 1952 S1 80". OK, get a S11 manual and look at the diagrams. This could work. The hyd pump is driven from the pto, the hyd motor is connected to the winch, there is a hyd control valve, a 4 gal hyd fluid reservoir tank, various fittings, a filter and a bunch of pressure lines connecting everything.

OK, go on the internet and start learning about hydraulics. It turns out that for 8000lb of line pull, at 30 ft/min wind in rate, I need 500 in/lb of torque at the input shaft. This translates to a hydraulic motor/pump combination that pumps 10gpm at 1000rpm at ~1000 psi. (Whew! Got all that?)

Out I go to price this stuff at my local hyd dealer. I almost passed out at the prices. \$300 for motor, \$600 for pump, \$150 for ctl valve, \$250 for lines, \$200 for all the filters and fittings .... even at Canadian \$\$'s this is pricey, and doesn't even include the costs of building a tank or frame to mount the winch! Well after several weeks and some real serious sleuthing, I managed to source used motor, pump and valve for the princely sum of Cdn\$300. Even comes with a 90 day warranty.

Currently, a friend and I have welded up a new front bumper with the winch mounts built in, the winch rear mounting frame with built in mounts for the hyd motor, and have mounted the unit to the 80". Looks pretty good.

Over the next month I will install a PTO in my transmission and mount the pump to it. Then I will build the reservoir tank,





get the pressure lines made up and mounted, and try it out.

Work, work, work, work... I sure hope it is going to be worth it. My first roll of pictures should be developed this weekend.

A note from Andy Grafton on a Speedo Replacement: Just bought a "high kwality" cycle computer for the grand sum of Kr.49.95 (\$6ish). Adjusts sufficiently to allow me to use it on the hand brake/diff pinion or the wheel. Should be easier to install than a regular speedo cable, more reliable and a damn site more accurate. Goes up to 70mph. I shall attach the computer in the middle of the speedo with superglue. Another Genuine Part helping to keep my LR as original as possible.

A short note from Dick Joltes, newly arrived in Pittsburg: "We ran out to Johnstown to pick up the old boy on Mon-



day; I took along all the normal tools "just in case" anything came up, but no problems were to be seen. His batt'ry was a bit low after sitting for 4 months so he wouldn't turn over, so I astonished my father-in-law by popping the bonnet open and unclipping the crank handle. 2 shots of ether and he turned right over on the 3rd try.

Kris played chase car in her Saturn and 90 minutes later we were back in Export. He ran well along the way; I need to check the gear oil and get his oil changed since it's been a while, but after that he'll be good to go for the rest of the Summer.

People in Western PA are either a) oblivious or b) unimpressed by this sort of odd vehicle. Whereas we had lots of rubberneckers during the trip from Baltimore to Johnstown (people goggling at the weird car and such), very few drivers showed any interest during this phase of the drive. Weird.

Now it's just a matter of navigating the labyrinthine PA registration process and he'll be ready to roll. If the reg. transfer between MA and PA is any indication of the level of stupidity involved, I expect to have the LR on the road around 2003!

(But hopefully he'll be able to make an appearance at this Saturday's meeting, Scott...)

A short note from Niall Forbes on why he could fix his Land Rover one day: "OK, well you see, my mom took the car this morning so I can't go out to Con's till this afternoon so I won't get a full day in but it's not my fault. See, I couldn't help it. Uh....did I mention that when Bruce aired down one of his tires kept going as we drove along till it was flat? " (Ed note: He is learning, deflecting the discussion to others foibles! Double-PlusGood!)

A note from Niall Forbes – "Hey Dixon, Hope it's cold and snowing in Ottawa ;-) I really liked Bill Rice's quote in the last newsletter about the "free market freak show" - both the quote itself and the idea of including little things like that throughout the newsletter. I've got one for you that I really like. "Good grief... you will look like a tug boat" - Bruce Fowler, after hearing that JL Morin planned on coming down to the Moose Trophy with four spare tires. Apparently the long suffering Deirdre felt that he was a bit unprepared at the Winter Romp. Anyway, I don't know if that fits in with things or not but if it does, great!

Red Zit Report - The Zit passed his safety inspection today with flying colours. Admittedly the inspection may have been a bit casual but that's not the point. After a short lay-up, the clutch was replaced and the footwells welded. And I didn't even burn down Con's garage while welding - good job he's got all those fire extinguishers though.

Anyway, as the Red Zit pulled out of the garage and motored home, the snow stopped, the clouds parted and the sun came out. The world is right again. Have I mentioned to you that the local Land Rover dealership has a Disco lent out to Kevin Spacey while he films in the area. He wanted a Range Rover

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but they didn't have one on hand at the time. I hope he's managing! Talk to you later (and what's with all that + earth propaganda you're spreading on the LRO list? ;-)

Clutch Bleeding mystery resolved! By Keith Tanner

It's good to live in Ottawa. Ted Rose stopped by today to help troubleshoot my recalcitrant clutch system. After some goofing around with my vacuum pump, we pulled apart the clutch master cylinder while it was still installed in the truck. It turns out that I had neglected to bend the locking tab for the spring retainer down enough during my rebuild and the piston was roaming free in the bore. About three pumps later and voila! A hard pedal. Ted vanished off again after spending an hour in the driveway, spreading Land Rover cheer as he went.

So - the moral of the story: even if you think the spring is always compressed and doesn't really need that locking tab, it isn't and it does :)

Things still aren't adjusted quite right, as the clutch seems to drag just enough to prevent me from selecting a gear when the truck is stopped - but that's something I can deal with by getting the right adjustment on the pushrod, I hope. It will sit happily in the driveway with the clutch in and a gear selected so it's obviously a very small amount of drag. Unless there's some "feature" I don't know about - it's a IIa with the later hydrostatic clutch.

Thank you Ted!

A Sunday story from Alan Richer: "Went out Sunday morning to run some errands - hopped in Jess' driver's seat, pushed the clutch down... ...and got a foot full of brake fluid for my troubles. Ick. Serious leaky master cylinder. Of course, I knew the damn thing was bad - it had no paint on it anymore and it had left a wet spot on the mat below. I had the replacement ready to go in - the time to put it in hadn't been there. So, rather than finishing Mr. C's chassis (which is what I wanted to be doing) Jess was getting a new pedal box and clutch master.

I must say, RHD does make it a lot easier than LHD - not having to remove the wing is a blessing - though the extra room over top would have been nice. First, off came the reservoir after carefully blocking up the brake pedalto prevent fluid loss. This went into the house for a washing, derusting and a couple coats of quick-dry paint. While that was drying the old pedal box and master came out...or tried to.

The lines were most definitely stuck and did NOT want to come out. Only after 45 minutes of heating and blue language did I manage to gtet the line from the reservoir to the master loose - and unfortunately rounded the nut doing so. Oh, well - I have a spare....LHD one that doesn't fit the damn car...damnit! Off to the workshop, a vise and a file, where I carefully recut the flats on the flare fitting nit from 1/2" down to 7/16". It's a bit crude, but it will do till I can get a replacement RHD line (the LHD one being 8" too long....).

Thankfully the other not had no such issues and the pedal

box was soon removed. Cleanup of the area took but a few minutes, than a coat of sealer went down to waterproof the join between pedal box and footwell.

Got that bolted in, then into the house, grabbed the newly painted reservoir and remounted it. Now we're moving - fill it up, check for leaks (none), open the bleed screw and handpump the pedal till a good fluid flow is gotten. Tighten and reinstall the plug and Houston, we have clutch... Except for the buggered flare nut, the whole job went flawlessly start to finish. I was quite pleased.

A note from Bill Rice in Colorado: "Sadly, I will not be making it to the BP this year since I'm a) in CO (though that alone would not keep me from attending) and b) taking a summer class the last day of which is that Friday.

The good news is twofold:

1) Mrs. Merdle's frameover is almost complete. A few more body panels, and some wiring and she will hit the road with new galvanized chassis, new galvanized T-pieces, and just about everything else galvanized (incl. repaired bulkhead, breakfast, and all the trim. New wiring harness, new clutch



master, new relay for the hellas, and many more goodies. V. exciting-have had two frameover parties about a month apart-had eight guys (at the peak) plus me at party #1 (teardown/new chassis on running gear) and 5 plus me at #2 (reassemble, figure out new wiring harness, etc).

2) I'll be stationed at West Point for three years starting May of 02, so I'll be attending lots of OVLR and NE rover stuff for the next few years (unless West Point has us do something flaky in the summer time that includes weekends, which I don't think they do since I did a rotation there doing tactical training w/ 'em a few years back and we had weekends off).

Have a blast this summer and drink one for me. I'll crack one for you netslummers at the Solihull Society rally in Ouray this August. If any of you want to come out I have seating for lots and lots of passengers. Yours truly, bill 🗣 Gasket under glass material from Scott Wickham

Well, I finally got around to pulling the head off Sherman to see if in fact I had a blown head gasket. You bet! A good 1/2 in gap missing from the middle of it between cyl.#'s 2 and 3. And the 3/4 gap was cracked but still there. I didn't crack check it yet but, the block looks good from just eyeballing it. I'll bet he runs better when I get that new gasket in there. I have to go out of town for the rest of the week but at least I know what's going on in there. Next is the xcase. 2Hi good, 4Low good, 4Hi seems to give power to the front, then slip, then power, then slip. Scary clank when it does this too. I'm thinking about taking Sherman to Ottawa this year so I'll need to get this sorted 1st. I think I can find a SIIa xcase to put in there to see if that will fix it until I can get into the one that goes clank...clank...clank.

By the way, we have a new SI in Pittsburgh! Mark Love has

purchased a '58 RHD SI 88" in great shape. We drove down last Sat. to Baltimore to get it. Seems that Quintin was the one who brought it into the country back in '91ish. I was sold to Tony, and now Mark has it. What a nice truck. New brakes all around, new tilt, pretty fresh 2.25 engine with a Weber 1bbl. Nice hard top and doors too. A few of us FPLRG guys were over there Sunday as Mark and Dave got the brakes working then 7 of us piled in it and drove through the neighbor's yard down to the street. Carb needs rebuilt to be smoother and it popped out of low a couple times (good thing the brakes worked so good!). Good score on that truck Mark.

Dick Joltes in Pittsburg sends along this note: Now that Smudger is home and in the process of being licensed to roam the roads of Pennsylvania-

along with a lot of other cars that long ago ought to have been melted down and turned into Iron City tins--I thought it was time to start cleaning up some of the more disreputable-looking bits. First thing that came to mind is the front bumper; it is, after all, the first piece of the car that most people see (oft from the rear-view mirror, where their response frequently runs along the lines of "cor bli'mey, looks like my Mum- in-law's face").

In Smudger's case the bumper is especially ugly



Photos: Bill Maloney

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since it's bent on both ends. The drivers' side was knocked back slightly long ago during some accident or other involving either another vehicle or a brick wall, or maybe a squaddie who managed to rear-end that 70-ton Chieftain tank. The passenger side was done over for me by some unknown driver on my old street in north London while the car was parked, and it'd taken the efforts of myself and a local friend with a long 1" steel bar to correct all but the last inch of twist. Plus, the paint job was largely flaked off and I wanted to get inside the thing and rustproof as much of it as possible.

The adventure began with the application of large quantities of 3-in- 1 oil, as should all repair jobs involving removal of bolts that haven't seen daylight in 26 years. Said oil was applied liberally to the threads, which had previously been cleaned of the larger hunks of earth & rust through judicious application of a brass brush. It was then allowed to do its work for 12 hours.

The next day the extraction process began. As I was working alone & space behind the bumper can be tight, a lot of time was spent putting a 9/16" under pressure on the nut so that more leverage could be applied to the bolt head. Surprisingly, only one of the small 7/16" bolts on the top side of the center section sheared off, and the rest were removed without much ado. A few whacks with a 3# sledge loosened the bumper, and it was removed and laid to rest on the floor for a closer inspection.

It was then discovered that the long-ago drivers' side impact had been a great deal more

severe than previously expected. The upper section had actually been torn somewhat, and the 1/8" steel risers that hold the end bumperette in place were actually twisted quite badly on one end-badly enough that applying a wrench wasn't much of an option. I now knew why the front end of the wing (under the headlamp) on this side had been bent under somewhat, requiring earlier disassembly and repair. A few minutes with a torch loosened the nuts sufficiently to allow removal, but a lot of metal-work will be needed to correct the problem before reassembly can begin. I was now left with three bits of metalthe main rail and the two bumperettes-and a lot of anvil work to do in straightening it all out.

The good news is that the frame and inner bumper in this area is in good nick, with only a clean-up, sanding, and Waxoyl application to get it cleaned up.

[end of part one...more soonish]

Ed note: This message was forwarded to me by about five different people! It seems the adventure was quite an experience!

We will start with a message from Jeff Berg: "I want to nominate J-L's girlfriend Dierdre for some sort of of award... On the way to the Moose--they weren't even planning to go until Bruce, Eric and I convinced J-L at the last minute--they broke a half shaft and dropped a front drive shaft... Other stuff toohelp me out guys. (Oh yea, they weren't able to start the car normally--we think the large hole in the side of the battery had something to do with this...)

At the Moose she stands by placidly--waiting to go offroading-

-while J-L fixes all this and fabricates a new tranny tunnel cover from John Cranfield's scrap bin. Then on the way to the offroading J-L breaks another halfshaft trying to bump start the truck in reverse--the "replacement" battery he found laying about John's farm wasn't any good.

Their trip home is outlined below.... To fully understand Dierdre's devotion, you would have had to have seen in person the way she runs to the "Rover" and hops in (chasing it down the road after pushing it for the bumpstart.) This girl redefines the term "waterproof." And she keeps getting into that truck...

A Note from Jean-Leon Morin:

Thank you to everyone who helped Dierdre and I attend the moose. For those of you who didn't know, I basically had a free ticket there, as Bruce F, Jeff B and Eric R, Ben Pooley, Gerald R, and others that I can't remember (sorry, everything is a blur of exhaust smoke and smeared 90wt) pooled together to PAY MY GAS. I would not have been able to attend otherwise. I have never witnessed such an act of

general nice-ness. I still cannot believe it, and you can bet that I will try as hard as I can to repay the favor as best I can.

This, plus the generous offer of rides in the Crab, and a bed in Eric and Jeff's Motel room. This was really nice, guys, as I know it put you in a compromising situation, I thank you. I suspect Dierdre feels the same way. Thanks for feeding us also. Food is always nice. John, I'm sorry I made a mess of your driveway, and thanks for the use of you tools. I hope I can return the favor someday. The Moose was great, I hope to return next year, hopefully driving a quieter, much more reliable rover. Or a range rover ;-) Niall, thanks for the second halfshaft, I babied it all the way home. Thanks to everyone who wrenched or watched on Valdez at John's house, it was really appreciated.

After leaving Niall, my wipers crapped out. In pouring rain. No problem, use the manual thingie. After a while, around moncton, the hi lo shifter started rattling like mad. I stopped in the pouring rain, and took my front propshaft off, lying on my back in a puddle of cold water. The front U joint was FUBAR. Anyways, it was not the source of my "bad vibe".



Photo: Bill Maloney

The noise got to the point where we had to stop and see what it was tomorrow. Scary vibration. Stopped in a motel outside of Fredericton, took a warm shower, and washed my only pair of pants in the tub (thanks for the idea Jeff). Got up the next morning, looked the truck over in the pouring rain, and found nothing abnormal. I thought that the rear U joint was getting shot, so we pressed on.

The tuesday went well, we actually racked up miles real quick. Made it to Riviere du Loup, PQ, and then, it started happening. Transfer case sounds like a jetplane. LOUD whirring/whoosing noise, vibration that is terrible. I started getting mighty scared. I start thinking of what could have happened. Anyways, we stop in a truck rest area. Shift into low. CraSh Clunk whirr bang. Uh oh. I get out, look under. I grab the transfer case, and notice that IT IS NO LONGER ATTACHED TO THE TRANSMISSION.

The four bolts that hold the adapter plate onto the transmission are completely backed out, there is oil everywhere. These bolts were loctited (blue) and put on with an impact gun. The only thing holding the T case onto the transmis the t-case mounts that are sort of pushing both together.

My options at this point is getting it flat towed 450 kms, or try and fix it. Fixing it involves removing the transfer case from the adapter plate, reattaching the adapter plate to the transmission as the bolts are countersunk and not accessible if the T case is bolted up, and reassembling. Not an easy feat as it is getting dark quick.

So, I start off. Pull driveshaft, P brake, PTO, t case pan, drain gear oil into pop bottle for reuse. I notice the tranny output shaft, the one that cost me 200\$ to make, and had to be cut, welded, and machined to perfection, is broken. The piece

from the special nut that holds the gear on, to where the PTO supports the shaft, is broken clean off. Great.

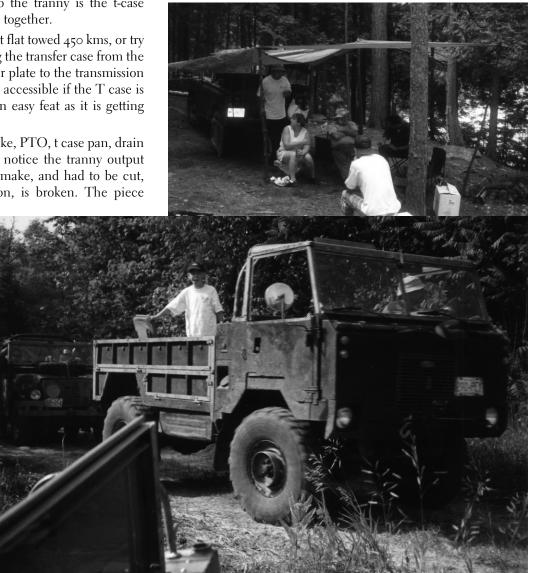
I finally remove the T case, tighten up the bolts, reassemble T case in the dark with maglite, fill with oil, and put on driveshaft. Clean up, jump in. Those of you who thought I worked quick at John's house, ye aint seen nuthin yet. 2 hours, from stopping to check, to hitting the road. No lie. I have never worked as quickly as I did yesterday.

Hit the road, whine is still there - but only not as bad. I drop Dierdre off at home. She kisses the ground. It is 2 am. We have been on the road since 10 am, I feel like I'm going to throw up. Anyways, I have pictures to prove the following. They will be up eventually. Right now I want to go out and pick up a toyota echo.

Ed Note: I'll finish off with an amalgamation of a couple other notes received: First from Bruce Fowler:

What is it with you guys up there in Ottawa? J-L's truck falls apart, Kevin's tranny lunched on the 3 to 4 synchro, the other Kevin's tilt become's one with the earth. Guess you guys shouldn't go rovering through the provinces on a regular basis (Bruce PS. Yes, I trashed my front diff. last weekend... but not on a motorway!)

And finally from Niall:"I've heard from the rest of the Ottawa crew. As we heard from Rino, Brent, his brother Kevin, and his other brother Kevin (get it?) kept going after Rino's RR quit. About 30 minutes later the soft top on Kevin's lightweight disinigrated. He tied the fly from his tent to keep the rain out but it was so loud that as soon as the weather improved they took it off. Other then that they made it home safely."





Last night, on the Simpsons of all places, a Series III 109 Station Wagon. Homer won a trip to Africa for the family and they were taken on safari in the Land Rover. It had the front half of the top removed so they could all poke their heads out to see the wildlife. You could tell it was a Series III by the front grill, but on interior shots the dash was drawn more 2A-ish. It was quite a funny episode. (from Brett Storey)

Following on the theme of advertising, we received this commentary from Tate Crumbley: "Speaking of which, have you guys seen the Miller Lite commercial of the "first person" profile view of a Rangie in a driveway, with the bottom line being "despite its capabilities, this person/vehicle will never go offroad. Real men drive trucks. If you drive a Range Rover, you might as well wear a dress." I didn't like it much. I wonder if the Ford marketing/legal muscle will flex to get it removed. " (Ed note: We are not sure if this ad was shot just to the east of Toronto, in Pickering to be exact!)

More Rovers in movies: Animal Planet ran Gorillas in the Mist two times last night in a row. There's a nice section where, hehem, Louis Leki is waiting for Diane Fossey (Sigourney Weaver), greets her at the airport, quickly introduces her to her Land Rover, and he's off. Despite it being 1967 at the time, the Rover is a Series III but I'm sure the producers know that or cared. But Leki says to her "What we have here is a Land Rover, a 4 wheel drive. You'll get the hang of it soon enough. Push the yellow knob down for 4 wheel drive, pull the red knob back for low." Good little segment. (submitted by Andre Shoumatoff)

Towards an Alternater Parts List: A couple more timing chain cover seals are CR 18555 and CR 18558. Both are thinner than the stock seal, with the CR 18558 being thinnest. One of each or two of the thinner ones will fit in the cover, giving a double lip seal. (submitted by Jim Hall)

• Overdrives: Toro vs Fairey, the results - I compared the two today and a Toro is not a rebadged Fairey inside either. The components are very similar, and most of the bearings seem to be the same. The input and output shafts are the same size on the bearing surfaces, and the same length. The Toro has corser splines where the synchro goes, and a larger diameter synchro. The gears are also wider on the contact area than the Fairey. The Toro has 22 and 25 teeth on the od gears, while the Fairey has 23 and 26 teeth. So other than bearings and possibly the intermediate shaft(with some shortening going from fairey to toro), no parts are interchangeable between the two. However, if you took ALL the Fairey internals or All the Toro internals, they could be assembled in the other overdrive's case. One point it was noted about the Fairey is that you was never sure if the oil level was checked with the stick screwed in or just pushed in. After comparing to the Toro, it appears that the dipstick should NOT be screwed in to check the oil level in a Fairey. Also, the seals for the input and output shafts seem to be the same on both units. (sub-



mitted by Jim Hall)

Handy Rover Tip #478 -Paint: If you're not a fanatic about original finishes a good source of supply for paint for Rover bits is as near as your telephone.

Benjamin Moore has the Impervo line of paints - an alkyd resin enamel paint not unlike the older DuPont Dulux finishes, but much slower drying. Most of the stores also have computer colour-matching services to give you a good match to the paint presently on your car, or to a sample of the colour you need.

I recently tried this trick myself - made myself a test chip



of Marine Blue by applying some touch-up paint I had to a metal scrap. I then took this in to my Benjamin Moore dealer who mixed me a quart of Impervo to my colour sample for the princely sum of \$12.99. A can of spray primer was another 6.99, so I was in and out of the paint for a little over 20 dollars US.

Application was a breeze - the spray primer went on nicely on my test subject - a doortop for my 58 88. Then I brush-applied 3 coats of the Impervo paint, drying overnight and hand-sanding out the brushmarks between coats.

It's not perfect - unthinned paint tends to brush mark more than I care for - but initial results for colour match and gloss were perfect. We'll see how well it wears - but as this paint is designed as an outdoor paint for metal I can see it holding up well. Time will tell - but I'm not concerned.

(submitted by Alan Richer)

Some interesting web sites on the subject of anti-freeze, or coolant in Range Rovers:

Hi Dixon, I hope you can remember me, Mike Wesson -I drove my 1980 sandglow Range Rover to the breakfast meet a quite a while ago for Sherbrooke? Any way I finally got to join the club! I was so busy I didn't get round to it, but now my Land Rover restoration has taken a new twist, and now I import Defenders into Canada. I teamed up with a European company who send me some very nice vehicles - mostly LHD and some run on propane too. We are going to be doing used parts for all LR products soon, as we have several containers of stuff in Europe waiting to come, but foot and mouth thing made us hold for a while as used parts from Land Rovers are subject to customs inspection at the moment and that can get expensive. I will be offering a discount to club members for parts, and services. The Defenders? - all mine are serviced and warranted - and it is my full time job! Anyway, if you want more details, just ask. Thanks Mike Wesson - Britannica Restorations 546 ch. Labonté Eaton (Lennoxville) Quebec J1M 2A2 (1 819) 875 1459 email britrest@britrest.com

TRIVIA: Licence plates were introduced in Ontario in 1903. They cost two dollars a year. However, the debates in the Legislative Assembly at the time was not over these new plates, nor the cost, but increasing the provicnial speed limit from seven to ten miles an hour! The first license plates were leather with steel numbers. In 1905 they went to rubber, in 1911 to porcelain (which didn't last well), to flat steel in 1912, and finally the current style in 1921.

Why is this interesting? Because Ontario has passed Bill 99, a bill that amends the Highway Traffic Act. What this means is that in late Spring, or early this Summer you should be able to register your Land Rover with Year of Manufacture plates. All it will require is filling out a bunch of forms. There is nothing in the press reports that indicates that using these plate will imply any restrictions on operating your vehicle in the fashion that Historic Plate severely curtail where and when you can drive a "historic" vehicle.

In other club news of note, the longest running editor of any North American Land Rover club newsletter, Sandy Grice has finally called it a day after fifty editions and some six hundred pages of newsletter. This is spread over fifteen years, which gives him a good run at being editor than most European clubs too...

Local Events: I am the coordinator for the Smiths Falls Safe Community Committee, as part of our annual Rideau RecFest on July 14, 2001 on the banks of the Rideau at Lower reach Park, this year we are hosting a car and bike show. The day includes events for the whole family. On site that day will be the Ottawa Senators/Molson Canadian Summer Caravan Inflatable Games, a Crafters and Artist Market, The Great Inner Tube Races, various demonstrations and bands. We are hoping to draw car and bikes of all types: classic, sport, antique and specialty. You can send correspondence via this e-mail or by phone at 613-283-4124 ext 111. The first 50 vehicles registered receive a RecFest Dash Plaque. The cost is \$10 payable to the Smiths Falls Safe Community Committee @ P.O. Box 695, Smiths Falls, ON K7A 4T6 With the cheque please send the Owner, Address just city is fine, and the car being shown for publicity sake. This event is being highly publicize in the media through the newspaper and the NewRo, so the sooner I know vehicles the sooner I can put them into media packages. Thank you and if you need any other information please feel free to contact me. Lorrie Lee Briggs

Jeremy Clarkson on the Defender :Trendsetter... Land Rover Defender is the vehicle to be seen in

The trouble with fashion is simple - when it's new it's expensive and when it's not new it's not fashionable any more. So I was delighted to note that around the trendier parts of London, the traditional Land Rover Defender has become as important as the Jimmy Choo shoe and the pierced navel. You see them parked outside every bar and coffee shop - and this is good news because, of course, the Land Rover is not new. And that means it's not expensive either. Hell, you could buy one with a best before sticker of 1951 for a tenner.

So, keen to see if the old war horse can still cut it in a world where we all expect a bit of luxury and oomph, I thought I'd spend a week with the long-wheelbase 110 County. New, this would cost you £23,000 but then you do get seating for ten and a sure-fire knowledge that you'll never be going fast enough to have an accident. I have no idea how quickly the Defender gets from 0-60 because I never got there. Land Rover claim a top speed of 80mph but that's only if you've been fired from a steam catapult on one side of Nevada and now you're on the other. Realistically, your top speed is 45mph.

The main reason for this is the catastrophic din made by the four cylinder diesel engine. Noisy is too small a word.

The Who, live, are noisy. Krakatoa, when it blew up, was noisy. This is way beyond that. A stereo is provided as standard but God knows what it's for. It just sits in that archaic dashboard, as out of place as a titanium wristwatch on a Dickensian schoolteacher. It is, however, the only luxury you do get. There are no airbags, no electric windows or mirrors and no way of locking all the doors at the same time. You have to do it manually with the sort of key that they used to lock Elizabeth I in the Tower. It is therefore amazing to find that the car sits on coil springs, unlike the leaf arrangement you get in other fourwheel drivers. But don't be deceived. Don't think this makes the ride comfortable in any way. Because it doesn't. In fact the only reason you don't spend the whole time bouncing out of your seat is because you are wedged in there with your right shoulder pressed firmly against the door and your knees jammed under the dash. Off road, it can still teach the young Japanese whippersnappers a thing or two and let's not forget that it'll get the Army into places that the enemy would rather they didn't. But let's not get carried away. As a car, it is absolutely hopeless. As useless as a transistor radio at a rave.

But that said, I loved the challenge of getting it up to speed and around corners. I loved the fact it would swallow all the children a family could hope to conceive in a lifetime. And I loved the terror it invoked in people coming the other way.

They don't just get out of your path. They flee. This car then is like a wooden floor rather than a carpet. A wood-burning stove rather than central heating. Of course it's uncomfortable - all new fashions from shoes to body piercings always are. Comfortable is what your dad buys. Comfortable is corduroy. Comfortable is Abba. Comfortable is a Discovery. You want to be cool, get a Land Rover. It'll make you sweat a bit but you'll love it.

Haynes Manual Translations by Anon

Haynes: This is a snug fit.

Translation: You will skin your knuckles!

Haynes: This is a tight fit.

Translation: Not a hope in hell matey!

Haynes: As described in Chapter 7...

Translation: That'll teach you not to read through before you start, now you are looking at scary photos of the inside of a gearbox.

Haynes: Pry...

Translation: Hammer a screwdriver into...

Haynes: Undo...

Translation: Go buy a tin of WD40 (catering size).

Haynes: Retain tiny spring...

Translation: "Jeez what was that, it nearly had my eye out"!

Haynes: Press and rotate to remove bulb...

Translation: OK - that's the glass bit off, now fetch some good pliers to dig out the bayonet part.

Haynes: Lightly...

Translation: Start off lightly and build up till the veins on your forehead are throbbing them re-check the manual because this can not be 'lightly' what you are doing now.

Haynes: Weekly checks...

Translation: If it isn't broken don't fix it!

Haynes: Routine maintenance...

Translation: If it isn't broken... it's about to be!

Haynes: One spanner rating.

Translation: Your Mum could do this... so how did you manage to botch it up?

Haynes: Two spanner rating.

Translation: Now you may think that you can do this because

two is a low, tiny, 'ikkle number... but you also thought the wiring diagram was a map of the Tokyo underground (in fact that would have been more use to you).

Haynes: Three spanner rating.

Translation: But Nova's are easy to maintain right... right? So you think three Nova spanners has got to be like a 'regular car' two spanner job.

Haynes: Four spanner rating.

Translation: You are seriously considering this aren't you, you pleb!

Haynes: Five spanner rating.

Translation: OK - but don't expect us to ride in it afterwards!!!

Haynes: If not, you can fabricate your own special tool like this...

Haynes: Compress...

Translation: Squeeze with all your might, jump up and down on, swear at, throw at the garage wall, then search in the dark corner of the garage for whilst muttering "bugger" repeatedly under your breath.

Haynes: Inspect...

Translation: Squint at really hard and pretend you know what you are looking at, then declare in a loud knowing voice to your wife "Yep, as I thought, it's going to need a new one"

Haynes: Carefully..... Translation: You are about to cut yourself!

Haynes: Retaining nut...

Translation: Yes, that's it, that big spherical blob of rust.

Haynes: Get an assistant.....

- Translation: Prepare to humiliate yourself in front of someone you know.
- Haynes: Turning the engine will be easier with the spark plugs removed.

Translation: However, starting the engine afterwards will be

much harder. Once that sinking pit of your stomach feeling has subsided, you can start to feel deeply ashamed as you gingerly refit the spark plugs.

Haynes: Refitting is the reverse sequence to removal. Translation: But you swear in different places.

Haynes: Prise away plastic locating pegs... Translation: Snap off...

Haynes: Everyday tool kit

Translation: Ensure you have an RAC Card & Mobile Phone

Haynes: Index

Translation: List of all the things in the book bar the thing you want to do!

# General Servicing: Repairs, Humour, Tales & Trivia

# It's That time. Again A Friday Story Mike Rooth

Spring. Or so the DA ses. "Cut the grass," she says. Well, orders is orders I suppose. I can't say I'm enthusiastic, or even faintly compliant. But when 'er orders, well. . What choice have you got? Now, we have a problem Houston (OK Houston has its problems, I've got mine). A ton and a half of Bloody Nora blocking the garage doors shut. I can get in and out of the place (sideways) but the mower I cannot move. So Nora has got to be shifted. Nora has a busted gearbox, you will recall. You \*will\*. Look it up. And the failure of Bloody Nora to start means her instant death. Mind you, if she wont, I won't be able to cut the grass. She knows this. I've actually told her. I've also told her the results.

OK, here we go. Shift the Purple Pig. Backwards, out of the gates. Out of the way. Out of sight, come to that. Horrible little thing. Enter cab. Nora's cab, that is. Home. That is what it is, home. Key in and give her a full minute of (parallel wired) heater plug. OOooh lovely! Clouds of smoke and that ear-splitting rumble. It's strange, really. You get in, flick the window catch, open the window rest your arm out of the window, and you're home. Right. Into reverse and back her off. Warm her up

and switch off, clutch depressed with both feet.

Cut grass. This passes over a lot of pain and suffering. You dot want to know. Trust me. \*I\* didn't want to know. I do now. I wish I didn't. Gardeners? Keep 'em.

Come the evening, of course, the pony has to be brought in off the (grassless, just about), field. Purple Pig job, this. Well, Nora is poorly. Once home, Nora has to be moved forward so the Pig can be parked behind her inside the gates.

Right. This seems a lot of trouble, just to get the lawn mower out. Get in cab. Hang about! That was effortless. Just open the door and get in. None of this wriggling about, just get in. You don't have to put one leg in and negotiate the other, you just \*get in\*. It's called dignity, I believe.

Fine. I'm in. Heater for a bit, then start up, into fourth to stop the box... er... You what? You pillock, you cant get \*into\* fourth. Top gear was a no no some weeks ago. But it ain't now, apparently. Reassembly, they say, is the reverse of dismantling. But. Will they do it themselves? This needs research. \*Paid\* research. Cheques to... oh, all right, you've heard it before...

## Bye Nora. And Thanks. Another Friday Story Mike Rooth

Bloody Nora has gone. Tonight. Driven away, however, in her own smoke, proudly, and with dignity. Awkward to the end. And defiant. No tax, no insurance, no MoT.

Sod off the establishment.

She has gone on a long journey, at most a hundred yards just around the corner. The last I saw of her was a \*huge\* cloud of smoke at the end of the street. I didnt think she could do that.

I sold her to an ex-colleague for the princely sum of One English Pound. I gave him the new steering wheel, and a front pipe, and got all my tools out of her (and hopefully a jack handle I've just recalled, and if I havent he's going to get a visit).

Thanks? Well, I've never enjoyed a vehicle as much as I have this one.

Constant fun. Great pleasure , huge cred, lovely handling, and a great friend.

Fun in the snow, (oh great, look at this), water? floods? so what? Membership of the county emergency callout mob, and

watching a new and unveiled Jag whistling round the banked circuit like a jet fighter. And the horror of driving a Land Rover round a banked circuit. Rumbling around English country lanes at about thirty making perfect sense.

She has gone to a good home, I think. I hope. He is young, needs a life, (Nora will give him that), and I wish him, and her, the best of the \*next\* thirty years.

Me? Well, none of you care...

What I have at present is a Purple Pig. And Tomorrow I'm going to Melton Mowbray. It is the old home of the Quorn Hunt. And it has a very good Land Rover dealership. I'm forbidden to buy. But that is today...

And it makes pork pies. We cant \*stand\* pork pies. I want a 90...

Thanks Nora, for sixteen years of love/grump, of getting me home all the time when you were ill.

Oh 'eck miduck...

### Installing Saab Seats in a Land Rover Kevin Newell

When I decided to finally get myself a Land Rover I discovered that, well the seats really were not all that comfortable. Not true say the purists, they are functional, durable and versatile, yadda, yadda, yadda! Alas I have spent the better part of my (professional) adult life driving and through this I have found comfort is as essential to the enjoyment of the driving experience as is the trip itself. I have decided that comfort will be a part of my Land Rover life!

I have found that the only vehicle seats that I have always been consistently comfortable in, have been Saab seats. I have driven Saabs ever since I could afford to buy them. I have owned 5 Saab 900 models over the years. When Ted Rose found me my project Land Rover (Has Ted ever NOT found some one a Land Rover?) the seats were in their usual state for an abused and neglected early series III.

I took Stan (my series III SWB) to my brother's place outside of Ottawa near Limoges. There I began the task of really seeing what I had gotten myself into. I drove it around a bit and decided that those seats just wouldn't do. If I were to use this vehicle a lot, (which I intended to do) I wanted greater comfort.

I knew of several parted out SAAB 900 cars and retrieved the seats from one of them. I plunked one down on Stan's seat box and discovered that the seat angel was way too severe. Your knees would be too high and your bottom too low. I shimmed some wood under the rear of the seat rail and leveled it out. Wow, what a great driving position! The comfort was astounding, is what I thought as I happily bounced around the property driving with no brakes.

I used a ditch and few small trees to slow my progress back towards the house only now realizing that the seat was precariously perched upon the wood blocks. As I pulled up the whole assembly gave way and I was now atop an imploding vessel, myself, listing heavily to starboard, about to ram the dock and the screws had fallen off my ship! Hey these things must have a parking brake!? Yah! Pull it the genius thinks! Clickety, click! Goes the lever. The SS Stan is still inbound for the front of my brother's house. I can ram one of two huge maple trees, my brothers Jeep, his wife's car or my Saab and (then the genius thinks to himself if I hit anything this rusty ship will detonate into a pile of pieces).

In retrospect this all seems rather long and drawn out but I distinctly remember thinking all these things two years later. Funny how I can remember this stuff and not the trash my wife reminds me. I was holding onto the steering wheel with my left hand, falling over the passenger seat, travelling very slowly with the shifter busting my left kidney then I remembered! Turn off the key stopped very quickly and felt rather foolish but I had my new comfortable seats figured out.

How to install Saab 900 seats into your series Land Rover. (A step by step guide)

1.Secure for yourself two Saab 900 front seats. Model years 1979 to 1993 will work. Electric power seats will NOT work. Two door Saab seats will work better as they have a lever to fold the seat back, forward. Try to find the electrically heated ones and you can roast your buns in winter or keep your pizza warm in summer.

2.If you acquired the electrically heated seats check the heating grid first. Apply a 12-volt power source to the wires and see if it warms up. You'll feel it get warm with your hand in 10 seconds. There are grids on the seat base and the backrest in the lumbar area. If it does not work the grid on the bottom cushion may have broken over the years. Remove the buttons on the bottom of the cushion, pry off the metal spring clips on the edges and lift the seat lining. Peel off the foam covering the grid. If it fails to warm, trace the fault with a test light. Repair or remove broken sections of the grid as needed. If no fault is found you should unplug and put the thermister in the freezer for a few minutes and then try the circuit again. If it still fails to work the thermister may be bad. (If you have problems contact me, I have a Saab shop manual to help out).

 $_3$ .From the top of the seat base (where the foam meets the frame) measure down  $_3$  \_ inches and mark a line on both sides of the seat.

4. From the bottom edge of the seat base, pry out the galvanized channel support bar. (You don't need this spacer any more and cutting through it is not necessary).

5.Using a suitable cutting tool (I used a jigsaw with a metal cutting blade) cut off the bottom portion of both sides of the seat base. **Be careful not to cut the wires if you have a heated seat**.

6. The rear holes for the Saab seat base will now line up perfectly with the rear studs on the seat rails from the Land Rover seats. The front of the Saab seat frame rests about an inch from the front Land Rover seat rail studs.

7.You will either have to manufacture a bracket or weld the seat base to the seat rail. I chose to make a bracket and bolt it to the seat. I used 3/16-inch thick stock that was \_ inch wide.

8.The holes to be drilled should be large enough to fit the studs (approximately 5/16-inch) and you will also have to drill into the seat base leading edge to secure the bracket.

9.Hook up the electrically heated seat any way you see fit. Use a 25-amp fuse and a relay should also be used. I grounded the seat to the body and fixed the positive line to the fused dash switch. Mounted in this fashion the seat will function as designed and be able to slide forward and back a few inches. The backrest can be adjusted for angel and comfort from the side roller knob. You learn something new every day. Today it was that a 2.25 diesel will run perfectly well for 20,000km with no sealing washers whatsoever under the injectors. At first I thought they'd done the "invisibility" trick but after brutal attack with a number of instruments I had to admint that they actually were not there. Ho hum. "Right!" Thinks I. "Well with these new injectors and some washers this thing will really clean up its act."

No. Wrong. Incorrect. The injector holes are cleaned up...the washers are in there...the right way up and everything. The injectors are brand new from Mr. Lucas. There is no air in the system and...the thing smokes like a bastard.

OK it was running retarded, presumably because the new injectors were opening later. Advancing the ignition a couple of degrees really helped, but there is still more smoke than before, especially with my foot down. Maybe I can advance it some more, but it sounds about right as it is. Just to piss it off I fitted the 82C thermostat which works just right.

Andy 1, Land Rover 1.

#### Land Rover design history Fanie du Plessis

This weekend I found out what happened to the guy who designed the "spare wheel on the rear door" at LR.

He got promotion and they employed him to design the the door locking mechanism for the Discovery models. He then purchased redundant door locks from General Motors because after 6 years the spring inside them fails to keep the mechanism in the locked or unlocked position and the door cannot be opened from the outside.

Now these locks were made for big American trucks with big wide and deep doors. He then perfected the process whereby the locks were installed before the two door halves were welded together. He then remembered how useful bloudraad (fencing wire) was when he did his only overland trip ever for five days in Africa and used rolls of the stuff bent into nifty shapes to connect the lock to the levers, locking buttons etc. He then designed nifty litle spring clips to hold all these bloudraad into position. He wrote a routing schedule for the bloudraad comprising 500 pages and employed an oil rig specialist draftsmen to do the routing on a drawing using specialist pipe routing software.

He should be sentenced to do four years of community service for his crime to LR owners. If I were the judge I would sentence him to work at a LR scrapyard and all he has to do is to remove door locks from the door, remanufacture the broken springs and replace the locks. After a fortnight he would definately commit suicide.

# **Questions and Answers:**

#### More on Painting a Land Rover:

Question: I have decided to hand paint my 88" and want a color close to pastel green. Now, about a week ago I was browsing around on the internet and recall seeing a picture of a young lady's 88" (on OVLR or ROAV site?) that had been painted the same color. The caption mentioned a Martha Stewart "garden collections," or something similar, paint color. Anyone recommend a variety or close color match in a rustoleum or other exterior paint that can be found at the Home Depot or someplace?

Answer: That would be my 88. Now the young part could be debated however, since I am older than my rover! The Rover is painted with a Martha Stewart paint. I bought two quarts and only used one. Found the spare can and it is called "Martha Stewart Garden Enamels High Gloss Latex Enamel" in Dorchester Green \$7.95 per quart. Not exactly high gloss, then again I primed it with a wash of Dawn dish detergent then brushed and rolled it on. It's darker than pastel green. To find this paint I went to K-Mart after having the paint mixer kid open a bunch of cans searching for just the right color! Does that make it not a LR? Picture is on this page: Happy painting : ) Lori Sickley

Conclusion: You must choose between doing Bill Rice's Dupont Finishes Centauri in Pastel Green, Lori Sickley's Martha Stewart Dorchester Green, and Rustoleum Sage.... Hmmm...

#### Series radiators

Question: Is there a difference in the 2.25 rad and the 2.6 rad (SIIA)? I took one of my 2.6 rads down to Steve Johnson's and compared it to a 2.25, but didn't see a difference. All the state-side parts dealers only show one rad, but LR Supermarket shows a different part no. for the 2.6. The reason that I am asking is that Steve Parker recomends a larger rad for the Pug 2.5 turbo-diesel, but I want to stick with a standard looking rad. Any suggestions? Another question. The SII rad seems to be superior to the SIII as it has 5 rows that are offset to each other. the SIII rad only has three rows that are in line. Does the SII have more cooling power?

Answer: The core of the 2.25 and 2.6 L rads are the same. There is a difference in the inlet /outlet pipe positions. ISTR that the top connection is at the side on the 2.6 and in the center on the 2.25 The core is 439 mm between headers, 458 wide and 52 mm deep, ( 3 row - 10 fins per inch) or 73 mm deep on the ser2. There are a number of factors to be considered when comparing performance, the type and the spacing of the fin (fin density) are significant. I believe that the core thickness was reduced when the fin was changed to a higher performance type.

#### Alternator Conversions revisited

Question: Right, I'm considering converting my poor IIa over to an alternator instead of the generator. I'm willing to accept the stigma of driving a hybrid. I've read the articles about using the GM alternator - but I've also heard rumours of a Bosch that works as well. Does anyone have information/parts numbers/instructions on this particular version? Thanks!

Answer: Use the GM. You want the 10si with double pulley, as used in millions of of v-8 rear-wheel drive cars. Get one for a 75 olds 88. They're 50 bucks, with a lifetime warranty, from AutoZone. Fit a 5/16 bush to the mounting hole. Get a long 5/16" bolt (7 inches, I think. I couldn't find one long enough, so I used a piece of threaded rod, with stop nuts on both sides. ) You have to move the belt tensioner from one water pump mounting bolt to another one. Follow Al Richer's directions (at ) and you're set. It's a easy job. The Bosch may work great, but it'll be harder to find, more expensive, and every single autoparts store in NA won't have a spare.

A related question: The directions on the OVLR site mentions a 1970 Nova alternator. The one I got from Canadian Tire has a single pulley - but my generator is only using one pulley anyhow (the inner one). Is the other used for anything? Should I exchange this alternator for the 75 Olds version or is there no difference?

Answer: You really want the double pulley. The second pulley lines up with the crank and water pump without having to do any fabrication of mounts, spacers or anything. The 10si was used by GM from about 1968 until 1985, so you've probably got a 10si, if you got the one that's internally regulated. GM used externally regulated alternators into the mid-70's, but I don't know all applications. Take the one you've got back and get one with a double pulley, as they don't cost any more.

#### **Overdrive Removal**

Question: I am trying to remove my overdrive (Fairey) to tighten up my mainshaft nut and cannot get it to come off. I have already drained the oil, disconnected the linkage and the six nuts and she wont budge. Just wanted to ask the question before I took a rubber hammer to this expensive overdrive. Any ideas or input appreciated.

Answer: Is your gearbox in neutral? I was wrestling my Toro a few weeks back when Mitch Stockdale reached in and put the gearshift in neutral and the thing just about fell off in my hands it got so easy to remove. (Bill Rice)

#### CB Brake Master Cylinders by David Scheidt

*Question*: I can pump up the pressure and it will hit the floor a few times then hold. When holding, it will not fade, it will hold. Subsequent pumps willk also hold without fading and the brakes are strong. BUT if I let off the pedal and leave it for a few miniutes and then press it again, it will go to the floor again until I pump it. It is a new CB master type cylinder.

Answer: First thing to do is figure out where the air is. Put a set of brake hose clamps on each of the flex hoses. If there is no air in the master, the pedal will be rock hard. If it's not, there's air in the master. You can try bleeding it by slacking off the output pipe a tad. Keep the brake fluid off the paint, of course.

If the pedal is rock hard, then you have air in one or more wheel cylinders, worn shoes, oversized drumbs, incorrectly installed shoes, or the wrong wheel cylinders. If this is a 109, you might have an 88 master cylinder. If it's an 88, the pin that the shoes pivot on may be loose on the backplates. Go to the wheel with the shortest run of brake pipe (the front right, I'd think) and adjust the brakes as tight as you can get them. You shouldn't be able to turn the wheel at all. If you can, you've got oversized drums, worn out shoes, or bad adjusters, or all three. Take off the clamp on that wheel's hose. The pedal should still be hard, but a little bit of movement is okay. If it moves more than that, there's air. Bleed. Put the clamp back on, and repeat for the other wheel. Then do the back axle.

Take the clamps off, and you should have a good pedal. Adjust all the brakes properly, and you should still have a good pedal. If you don't you've got a mechanical problem – 88 master on a 109, shoes on wrong, worn out shoes, pivot pin movement on the back plate. If this is an 88, see if the brakes work in reverse better than they do forwards. If they do, than the pivot pins on the backplate are probably moving.

# A perspective on hub winches. Andy Grafton

Hub winches can cause problems on the front wheels of series vehicles when winching forwards, because the track rod is in front of the wheels. The force of the winch cables pulling the wheels slightly together at the front (forces can be high if you use a common anchor and get too close it) will collapse the track rod as it is under compression. Once this goes it goes all the way and your car drives all funny.

On a Defender/Disco/Rangie the track rod is behind the wheels and in tension when winching forward using the front wheels. Very much tougher and "approved" for heavier duty, so to speak, but obviously not as tough as the rear setup.

Cable or rope? Rope stretches more and is thus more forgiving to a jerky extraction, but less positive. Don't know about straps as they don't like coiling nicely onto a drum. I used most often a 2m length of welded chain onto the drum, attached to 9(ish)mm diameter cable, and the setup was way over spec. (I had it already)... 5 or 6mm cable sounds more like it. Work on the bolt/eye/whatever fitting to the drum, as I never got it quite right. I used a bolt through one chain link to secure the end. 2 cables that can be joined may be more useful than one long one, because ideally you want to pull parallel on 2 cables if you can, rather than using a single anchor. Angles and all. If you have a bull bar in nearly the correct position, you can weld eyes to it which will guide the cable to roughly the right place on the drum irrespective of input angle. IMO the hub winches are an occasional come-along, not a replacement for a "proper" winch that gets used as such. The alignment of the cables and wheels is a bit of a bugger to get right in the first place and adding in the complexities of a pulley system and cable back to the bumper might just drive you insane. Added to that when the wheels grip, you get slack in the cable because the car goes forward more than the cable winds in. Then the wheels slip again. Ctchanng, poing, clonk, thud, twang, jerk.

Practice makes perfect. I usually used the hi-lift for extraction (less hassle to lift car and put junk under the wheels than get the cable unreeled, muddy and so on) but the hub winches were invaluable for extracting Landie and Rangie a short distance from holes when I had broken a halfshaft, diff or CV joint and didn't have any go on an axle. And "bottomless swamps", for obvious reasons.

Don't worry too much about bashing them off the road. They are much tougher than they look. I would say if you don't have room for them inside, maybe drive onroad with them on the back wheels as they don't balance properly. I had them on the front all the time but never noticed a problem except for hitting poles in points events when I thought I had missed them.

Off the road you might be advised to keep them off until you need them. Odd advice, I know, but you may end up doing digging or tedious-tedious-tedious winching with a hi-lift if you are stuck with a wheel buried under mud or sand or into a bank. Sod's law says a wheel with a winch on it will be the buried one

I've only moved vehicles short distances with hub winches (<5m), never used them for a long pull, so YMMV.

# A clutching hand...or foot as the case may be.

#### Alan Richer

A friend of mine recently called me up with a dilemma - the clutch on his much-beloved Series IIa 88 was acting strangely - it would work but required King Kong to actuate it. Also, the pedal would stick down and have to be pulled up manually - not good.

As he was out actually driving it around in that condition (usung a rope to pull it back up!) I told him that some diagnostic work was definitely in order here ASAP before he killed himself.

First off, a bit of detail for those not familiar with the setup. The clutch pedal acts through a pushrod to the clutch master cylinder. This is connected to the bulkhead through a steel line, then through a rubber line to the clutch slave. The slave then actuates the linkage on the transmission bellhousing to engage and disengage.

Stiffness or inoperability can come from any number of com-

ponents in the chain - I've personally seen galled pedal bushings, swollen master cylinder seals, rusted pivots and defective hoses cause the symptoms my friend was seeing. To fix the problem, we had to determine where the failure actually was, rather than replacing items at random in the hopes of fixing the trouble.

First, we started out to see if the problem was a hung slave cylinder. I told him to open up the bleed screw on the clutch slave and act like you're bleeding the clutch. If the pressure immediately eased then it would have been a problem in the bottom-end of the chain - the slave or linkage may have seized.

As that wasn't the case I suggested he undo the line at the upper joining of the steel line to the rubber line - the rubber lines can often rot internally and look fine, but pass very little fluid and act like a check valve.

If it is still not working properly after releasing the pressure at

this point, then you've likely seized the bearing of the clutch pedal itself to the pedal box. If you look at the side of the pedal box you'll see the shaft that the clutch pedal rides on - and a bolt in the center.

Take the bolt out, put in a grease fitting (1/4-28 angled fitting

will screw right in) and pump in some molybdenum grease or the like. This may well help. If after all of this the pedal still refuses to work properly then the pedal box needs to come out and get worked over. More on that later...it's not rocket science but it is grubby work.

#### UK car index marks Frank Elson

People have asked me questions about UK registration (index) marks. The letters are either the only two on the plate, or, later, the last two letters. They tell you at which area office the vehicle was first registered. For instance: The first car registered at Bournmouth would have had the number 'AA 1' the next 'AA 2' and so on up until 'AA 999' whereupon the car after that would have been 'AAA 1' up until 'AAA 999' whereupon the next vehicle would have been 'BAA 1' and so on. Later they changed around so Bournemouth would have had '1 AA' and so on...

So if you have any UK plates, for example ABD 701A and YDF 940 owned by my good friend George Simmons in California... (hope it's ok using these as examples George?) ABD 701A was issued by the Northampton registration office (where Billing is!) in 1963. YDF 940 was issued in Gloucester but I can't say the date, Obviously it was some time before 1963.

AA - Bournemouth AB - Worcester AC - Coventry AD - Gloucester AE - Bristol AF - Truro AG - Hull AH - Norwich Al - Middlesborough AK - Sheffield AL - Nottingham AM - Swindon AN - Reading AO - Carlisle AP - Brighton AR - Chelmsford AS - Inverness AT - Hull AU - Nottingham AV - Peterborough AW - Shrewsbury AX - Cardiff AY - Leicester BA - Manchester BB - Newcastle upon Tyne BC - Leicester **BD** - Northampton BE - Lincoln BF - Stoke-on-Trent BG - Liverpool BH - Luton BI - Ipswich BK - Portsmouth BL - Reading

BM - Luton BN - Manchester BO - Cardiff BP - Portsmouth BR - Newcastle upon Tyne **BS** - Inverness BT - Leeds BU - Manchester BV - Preston BW - Oxford BX - Haverfordwest BY - London NW CA - Chester CB - Manchester CC - Bangor CD - Brighton CE - Peterborough CF - Reading CG - Bournemouth CH - Nottingham CI - Gloucester CK - Preston CL - Norwich CM - Liverpool CN - Newcastle upon Tyne CO - Exeter CP - Huddersfield CR - Portsmouth CS - Glasgow CT - Lincoln CU - Newcastle upon Tyne CV - Truro CW - Preston CX - Huddersfield

Today all car registrations are handled through a central office in Swansea, Wales - although the lettering will still indicate the area that the vehicle lived at first registration. There is nothing to stop a vehicle registered in Scotland (for example my old Range Rover OSM 400M, registered at Glasgow) being sold, subsequently in Yorkshire, which is where I bought it. My current vehicle, a former Land Rover owned one, B 791 PKV, was registered in Coventry. Land Rover seemed to use either the Coventry or Birmingham offices at different times. Until the suffixes and prefixes, since 1963, there is no indication from the registration number, of the year of registration. That would be shown on the registration document (log book) although, if you have a number Swansea can tell you the year it was issued.

I think I have covered everything, but if you have any other questions please try me out on them. Here we go then....

CY - Swansea DA - Birmingham DB - Manchester DC - Middlesborough DD - Gloucester DE - Haverfordwest DF - Gloucester DG - Gloucester DH - Dudley DI - Liverpool DK - Manchester DL - Portsmouth DM - Chester DN - Leeds DO - Lincoln DP - Reading DR - Exeter DS - Glasgow DT - Sheffield DU - Coventry DV - Exeter DW - Cardiff DX - Ipswich DY - Brighton EA - Dudley EB - Peterborough EC - Preston ED - Liverpool EE - Lincoln EF - Middlesborough EG - Peterborough EH - Stoke-on-Trent

El - Haverfordwest

EK - Liverpool EL - Bournemouth EM - Liverpool EN - Manchester EO - Preston EP - Swansea ER - Peterborough ES - Dundee ET - Sheffield EU - Bristol EV - Chelmsford EW - Peterborough EX - Norwich EY - Bangor FA - Stoke-on-Trent FB - Bristol FC - Oxford FD - Dudley FE - Lincoln FF - Bangor FG - Brighton FH - Gloucester FI - Exeter FK - Dudley FL - Peterborough FM - Chester FN - Maidstone FO - Gloucester FP - Leicester FR - Preston FS - Edinburgh FT - Newcastle upon Tyne FU - Lincoln FV - Preston

FW - Lincoln FX - Bournemouth FY - Liverpool GA - Glasgow GB - Glasgow GC - London SW GD - Glasgow GE - Glasgow GE - Glasgow GF - London SW GG - Glasgow GH - London SW GI - London SW GK - London SW GL - Truro GM - Reading GN - London SW GN - London SW GO - London SW GP - London SW GR - Newcastle upon Tyne GS - Luton GT - London SW GU - London SW GU - London SE GV - Ipswich GW - London SE GX - London SE GY - London SE HA - Dudley HB - Cardiff HC - Brighton HD - Huddersfield HE - Sheffield HF - Liverpool HG - Preston HH - Carlisle HI - Chelmsford HK - Chelmsford HL - Sheffield HM - London Central HN - Middlesborough HO - Bournemouth HP - Coventry HR - Swindon HS - Glasgow HT - Bristol HU - Bristol HV - London Central HW - Bristol HX - London Central HY - Bristol A - Manchester **IB** - Reading JC - Bangor ID - London Central E - Peterborough IF - Leicester IG - Maidstone JK - Brighton IL - Lincoln IM - Reading IN - Chelmsford JO - Oxford

JR - Newcastle upon Tyne IS - Inverness IT - Bournemouth IU - Leicester IV - Lincoln JW - Birmingham IX - Huddersfield IY - Exeter KA - Liverpool KB - Liverpool KC - Liverpool KD - Liverpool KE - Maidstone KF - Liverpool KG - Cardiff KH - Hull KI - Maidstone KK - Maidstone KL - Maidstone KM - Maidstone KN - Maidstone KO - Maidstone KP - Maidstone KR - Maidstone KS - Edinburgh KT - Maidstone KU - Sheffield KV - Coventry KW - Sheffield KX - Luton KY - Sheffield LA - London NW IB - London NW LC - London NW LD - London NW LE - London NW LF - London NW LG - Chester LH - London NW LI - Bournemouth LK - London NW LL - London NW LM - London NW LN - London NW LO - London NW LP - London NW LR - London NW LS - Edinburgh LT - London NW LU - London NW I\_V - Liverpool LW - London NW LX - London NW LY - London NW MA - Chester MB - Chester MC - London NE MD - London NE ME - London NE MF - London NF MG - London NE MH - London NE MJ - Luton MK - London NE ML - London NE

OM - Birmingham ON - Birmingham OO - Chelmsford **OP** - Birmingham OR - Portsmouth OS - Glasgow OT - Portsmouth OU - Bristol OV - Birmingham OW - Portsmouth OX - Birmingham OY - London NW PA - Guildford PB - Guildford PC - Guildford PD - Guildford PE - Guildford PF - Guildford PG - Guildford TB - Liverpool

MM - London NE

MN - (not used)

MP - London NE

MO - Reading

MR - Swindon

MS - Edinburgh

MT - London NE

MU - London NE

MV - London NE

MW - Swindon

MX - London SE

MY - London SE

NA - Manchester

NB - Manchester

NC - Manchester

ND - Manchester

NE - Manchester

NF - Manchester

NH - Northampton

NL - Newcastle upon Tyne

NG - Norwich

NJ - Brighton

NK - Luton

NM - Luton

NN - Nottingham

NO - Chelmsford

NP - Worcester

NR - Leicester

NS - Glasgow

NW - Leeds

NX - Dudley

NY - Cardiff

NT - Shrewsbury

NU - Nottingham

OA - Birmingham

OB - Birmingham

OC - Birmingham

OF - Birmingham

OG - Birmingham

OH - Birmingham

OI - Birmingham

OK - Birmingham

OL - Birmingham

OD - Exeter OE - Birmingham

NV - Northampton

PH - Guildford PI - Guildford PK - Guildford PL - Guildford PM - Guildford PN - Brighton PO - Portsmouth PP - Luton PR - Bournemouth PS - Aberdeen PT - Newcastle upon Tyne PU - Chelmsford PV - Ipswich PW - Norwich PX - Portsmouth PY - Middlesborough RA - Nottingham RB - Nottingham RC - Nottingham RD - Reading RE - Stoke-on-Trent RF - Stoke-on-Trent RG - Newcastle upon Tyne RH - Hull RI - Manchester RK - London NW RL - Truro RM - Carlisle RN - Preston RO - Luton RP - Northampton RR - Nottingham RS - Aberdeen RT - Ipswich RU - Bournemouth RV - Portsmouth RW - Coventry RX - Reading RY - Leicester SA - Aberdeen SB - Glasgow SC - Edinburgh SCY - Truro (Isles of Scilly) SD - Glasgow SE - Aberdeen SF - Edinburgh SG - Edinburgh SH - Edinburgh SJ - Glasgow SK - Inverness SL - Dundee SM - Glasgow SN - Dundee SO - Aberdeen SP - Dundee SR - Dundee SS - Aberdeen ST - Inverness SU - Glasgow SV - (spare) SW - Glasgow SX - Edinburgh SY - (spare) TA - Exeter

JP - Liverpool

TC - Bristol TD - Manchester TE - Manchester TF - Reading TG - Cardiff TH - Swansea TJ - Liverpool TK - Exeter TL - Lincoln TM - Luton TN - Newcastle upon Tyne TO - Nottingham TP - Portsmouth TR - Portsmouth TS - Dundee TT - Exeter TU - Chester TV - Nottingham TW - Chelmsford TX - Cardiff TY - Newcastle upon Tyne UA - Leeds UB - Leeds UC - London Central UD - Oxford UE - Dudley UF - Brighton UG - Leeds UH - Cardiff

UJ - Shrewsbury ÚK - Birmingham UL - London Central UM - Leeds UN - Exeter UO - Exeter UP - Newcastle upon Tyne UR - Luton US - Glasgow UT - Leicester UU - London Central UV - London Central UW - London Central UX - Shrewsbury UY - Worcester VA - Peterborough VB - Maidstone VC - Coventry VD (series withdrawn) VE - Peterborough VF - Norwich VG - Norwich VH - Huddersfield VI - Gloucester VK - Newcastle upon Tyne VL - Lincoln VM - Manchester VN - Middlesborough VO - Nottingham

VP - Birmingham VR - Manchester VS - Luton VT - Stoke on Trent VU - Manchester VV - Northampton VW - Chelmsford VX - Chelmsford VY - Leeds WA - Sheffield WB - Sheffield WC - Chelmsford WD - Dudley WE - Sheffield WF - Sheffield WG - Sheffield WH - Manchester WI - Sheffield WK - Coventry WL - Oxford WM - Liverpool WN - Swansea WO - Cardiff WP - Worcester WR - Leeds WS - Bristol WT - Leeds WU - Leeds WV - Brighton

WW - Leeds WX - Leeds WY - Leeds YA - Taunton YB - Taunton YC - Taunton YD - Taunton YE - London Central YF - London Central YG - Leeds YH - London Central YI - Brighton YK - London Central YL - London Central YM - London Central YN - London Central YO - London Central YP - London Central YR - London Central YS - Glasgow YT - London Central YU - London Central YV - London Central YW - London Central YX - London Central YY - London Central

# And now, for something completely different... the new UK registration mark format

Frank Elson

Now, here's the new system starting in this September. Not that anyone I know will be buying a new vehicle anyway. Still it rounds off the information.

A new format for registration marks is being introduced from 1 September 2001. The new system is being introduced because:

• With the end of the "Y" registration prefix on 31 August 2001, the current system will run out of acceptable combinations.

• Combined with new rules governing their display, number plates will become clearer and easier to remember.

The new registration marks will all be made up of seven characters. There are three parts to the registration mark, each with a separate meaning.

• The first two letters show where the vehicle was registered, the local memory tag.

• The two numbers indicate the age of the vehicle, the age identifier.

• The last three letters give a unique identity to a vehicle, the random letters.

Local memory tags will help with the recall of number plates and the identification of vehicles.

- The first letter represents the region.
- The second letter relates to a DVLA Local Office.

Therefore in AB51 ABC: "AB" shows that the vehicle was first registered in Anglia (A) at the Peterborough office (B).

Age identifiers will continue to change twice yearly in March and September. In the example above "51" represents the 6 month period from 1st of September 2001 to last day of February 2002. 1st March 2002 to last day of August 2002 will have the number '02', 1st September 2002 to last day of Feb 2003 will have the number 52 and so on...a bit like the prefix and suffices, two changes a year.

The three final letters will provide a random element to make each registration mark unique.

Letters "I" and "Q" are to be excluded along with letter combinations that may be considered offensive. The letter "Z" will be acceptable in this element of the number plate. FULL LIST OF LOCAL MEMORY TAGS FROM SEP-TEMBER 2001

Local DVLA office Local Identifier Memory Tag A Peterborough A B C D E F G H J K L M N Norwich O P R S T U Ipswich V W X Y B Birmingham A - Y C Cardiff A B C D E F G H J K L M N O Swansea P R S T U V Bangor W X Y

D Chester A B C D E F G H J K Shrewsbury L M N O P R S T U V W X Y

E Chelmsford A - Y F Nottingham A B C D E F G H J K L M N P Lincoln R S T V W X Y

G Maidstone A B C D E F G H J K L M N O Brighton P R S T U V W X Y

H Bournemouth A B C D E F G H J Portsmouth K L M N O P R S T U V W X Y

K Luton A B C D E F G H J K L Northampton M N O P R S T U V W X Y

L Wimbledon A B C D E F G H J

Stanmore K L M N O P R S T Sidcup U V W X Y

M Manchester A - Y N Newcastle A B C D E G H J K L M N O Stockton P R S T U V W X Y

O Oxford A - Y P Preston A B C D E F G H J K L M N O P R S T Carlisle U V W X Y

R Reading A - Y S Glasgow A B C D E F G H J Edinburgh K L M N O Dundee P R S T Aberdeen U V W Inverness X Y

V Worcester A - Y W Exeter A B C D E F G H J Truro K L Bristol M N O P R S T U V W X Y

Y Leeds A B C D E F G H J K Sheffield L M N O P R S T U Beverley V W X Y

NB: In the event of one office receiving an exceptionally high demand that depletes its stock of registration marks, marks may be transferred between DVLA local offices. Which means that the ident won't be 100 per cent sure!

# Mr. Speeeedy Andy Grafton

My \$6 bicycle speedo is the dog's bollocks.

You can get to everything you need under the middle seat.

The magnet is epoxied to the handbrake drum. Holds itself in place whilst the glue sets. I wish everything would do that.

The sensor is epoxied to the topmost part of the handbrake backing plate. I used a needle file to roughen and profile the moulded plastic casing slightly so it sat just right on the backing plate, and cable ties all round the backing plate to hold it in place whilst the glue set. A more elegant way to hold the sensor would be to use the cord grip strap from a plug, with 2 M3 screws tapped into the backing plate.

Due to previous under-Land-Rover wiring experiences I changed the piffly bellwire from sensor to readout for 3A 2 core mains flex, with sheath. The soldered joint at the sensor end is encased in epoxy, the other ends soldered to the existing contacts on the readout base.

The sensor wire is cable tied to the existing speedo cable and follows the same route to the dash. Whilst I was at it, I moved the speedo cable so it didn't sit on the exhaust.

The readout is stuck to the bottom RHS of the water/fuel gauge glass, between the bottom of the fuel gauge and the charge light. A lovely place for it. Correct viewing angle and everything.

I looked up the BFG specs for my tyres ... 650 revs per mile = 403.89 revs per km...

1 rev every 2.476 metres.

Divide by 4.7 = 0.527 metres per handbrake rev.

Bike speedo duly adjusted to that.

Magnificent. Now I will remove the stop pin from the old one for theatrical effect. Then at least the "proper" speedo will serve some purpose by amusing me, going round and round and round and... A friend called me over the weekend - seems his recentlypurchased 1988 NAS Range Rover was noisy under acceleration. A trip to a muffler shop had inspected the stainless-steel exhaust system and found everything fine - leaving this gent with a puzzle and an annoyingly noisy car.

Now, stainless systems do resonate - and this one was no exception. However, the car was noisier than it needed to be and a few minutes' inspection with a handlight revealed the problem. Cracks. Specifically, cracks in the downpipes to the catalytic converters.

On Land-Rovers of this era, the catalytic converters have the front section of the downpipes attached to them. These attachments are a thick metal plate which has the pipe forced into it, then the seam is welded at the back for gas tightness. In its lifetime the pipes and plate had held up well, but the expansion and contraction of the joint had cracked the weld at the plate joining (likely poor penetration on welding being the culprit).

One side was cracked a good 90% of its circumference, the other only about 10-15%.

The cure was simple - we dismounted the catalytic converters, ground down the offending welds and rewelded the seams, then touching up the new welds so that the header pipe stud nuts would seat properly.

Raher than replacing a nastily-pricey component this seems like a great fix - cheap in materials and time even if the welding needs to be farmed out. Any reputable exhaust shop should be able to handle it if the RR owner can't find a compliant welder.

## Letters to the Editor...

#### Dear Dixon

I was skimming the internet and came across Alan Richer's article on Land Rover Timing Chain repair procedures. Nice article!

With regard to the use of Loctite products, the suggestion of avoiding the use of Red Loctite on regularly serviced joints is a very good suggestion.

Green colored Loctite products are also very high strength adhesives and will require more breakaway and prevailing torque to remove than the installation torque. Smaller bolts (1/4" and below) are very susceptible to having the heads broken off without softening the threadlocker with 500F heat for 5 minutes (Propane torch, soldering iron on smaller screws, etc.). On the other hand, the consequences of vibration loosening of critical bolts far exceeds the inconveniences of a difficult to remove bolt!

But, there is a solution. Loctite has several "Removable" grade threadlocker which provide excellent resistance to vibration, thermal shock, impact and still can be removed with the same hand tools used to install the bolt.

Loctite 222 is recommended on bolts 1/4" and less and is good up to 300F.

Loctite 242 is recommended for bolts  $1/4^{\prime\prime}$  -3/4" and is also good up to 300F

Some new Loctite Threadlockers are:

243 - a new generation version of 242 which is a little stronger (still removable) and is more forgiving on oily bolts and female threads. 246 - a high temp version of 242, good up to 450F.

Enough adhesive to cover 3 threads, all the way around, is the recommended quantity to achieve the published strength of the threadlocker. More or less will affect the ultimate strength.

Besides providing a positive locking action, chemical threadlockers also seal the joint - keeping in critical fluids such as oil, transmission fluid, coolant. etc.. and keeping out the elements such as rain and salt water, - the elements which cause bolts to rustlock.

Statistically, the use of chemical threadlocking is the most reliable and cost effective way of preventing bolts from loosening. Like any application, choosing the right tool for the job is critical - and the same goes for the use of chemical tools such as Loctite products. Loctite has a great website which has lots and lots of helpful information on products, tip for usage, case histories etc. You can reach them at www.loctite.com.

Sincerely, Brian J. Prunty Sr. Adhesives & Sealants Specialist Loctite 16631 Willow Glen Dr. Wildwood, MO 63040

#### COUNTRY LIFE—FEBRUARY 22, 1973



# Back in 1951, some people thought the new Land-Rover was a bit expensive.

Here's one who didn't. In 1951 Lord Lambert bought a new Land-Rover for his Devonshire farm.

Now, 21 years and about 90,000 miles later-still driving with the same engine-he thinks it's absolutely while the famous high standard of the most economical car he's ever owned. And Derek Butler, his farm manager, knows it's the most he's ever driven.

The price of a new Land-Rover has gone up since then (hasn't everything?). What is unusual is that the strength and performance of a '72 Land-Rover are also much increased, manufacture has remained unchanged. the years you know it's going to run.

The new series III Land-Rover has a new gearbox with synchromesh dependable, versatile and rugged car on all four gears and a stronger reverse Then you get a true picture of what gear. The clutch lasts longer and is

lighter underfoot. The suspension, chassis and axles have been strengthened even more.

So when you think about trading your old Land-Rover for a new Series III, think about the cost spread over all

Think of the extra strength and the improved efficiency you'll be buying. the new Land-Rover is worth to you.





British Leyland UK Ltd, Solihull, Warks