



WAYPOINTS

October - December 2007

Vol. 9, No. 4

President's Message

From Dennis Yard

Volunteerism is one of the strongest elements of American character. You can see that even in just our own small Land Rover community. Our members support their communities with membership in the Red Cross, Scouts, military reserves, service dog training, professional organizations and social clubs.

In making our own Club even stronger, more fun and accessible, there will be times for the Board to ask the general membership to provide some time and effort. At this time, the Club has committee chair positions and special events positions which need the energy, imagination and thoughtfulness of members.

Please take a look at your calendar and see if you can step into one of the following positions:

Regalia Chairperson: Purchases and Distributes Club Logo'd clothing, stickers, mugs and license plate frames. The Chairperson only has to show up at the monthly events (11 left for 2008) and handle the inventory. The current Chairperson (me) will have a new stock of items ready for the February meeting and will provide training.

Rover Rendezvous 8 Liaisons: Two or three persons will coordinate LRCSD participation in the event; prior to the event and during the event from April 4 to 6, 2008. The event has been announced by the Las Vegas Club within the past couple

Trip Report: Coyote Canyon

By Bob Palmer

We had intended to go the Arizona for our November trip, but the October wild fires disrupted our planning and we had to postpone the trip. So we took what turned out to be a long one day trip out to Coyote Canyon in the Anza Borrego Desert State Park.

We had a good turn out of 8 Rovers for the Saturday after Thanksgiving. We met at Christmas Circle in Borrego Springs. Just east of Christmas Circle, we turned north on Di Giorgio Rd and continued north until the pavement ends. We were now at the entrance to Coyote Canyon. This area is closed during the summer, because it is a critical water source for the endangered Peninsular Bighorn Sheep.

There are two main features on this trail. Water crossings, and a rocky hill climb.

The first two water crossing were mostly dry, but the third water crossing had deep water and lush green vegetation. Some drivers reported water up part way on their doors.

The next event was the rocky hill climb. We all grouped up in the open space at the bottom. Bob and Dennis walked the hill to determine the line we would use to spot all the drivers up the hill. With a little finesse, it

Trip Participants:

- Bob Palmer, White Gold Range Rover
- Dennis Yard, Blue Disco I
- Rick Peterson, White Gold Disco II
- Doug & Stacy Paton and Jim Chapman, Silver Disco I
- Jerry Sanfilippo, Black LR3
- Paul Stastny, Black Disco II
- David Smith, Red Disco I
- Jaime Alvarez with Amy, White Disco I



Photo: Dennis Yard

Photos:

*Above: Bob coming through the third water crossing
Below: Stopping for lunch in Sheep Canyon*



Photo: Dennis Yard

Tech Tip: Differential Replacement

By Bob Palmer

It happened just driving around town on a Saturday. When going around a corner the truck started making a clunking sound from the rear, and the truck would lurch. Everything seemed fine if you were going in a straight line. I jacked up both of the rear wheels, and I could turn one wheel about a third of a revolution, and the other wheel would not turn at all. The wheel would then bind, and it took some force to rotate it in the opposite direction. Something was wrong with the differential.

I sent an e-mail to Nick describing the symptoms, and got back a reply to bring it up to the shop on Sunday. Nick had just returned from the Club's trip to Moab. I got up to the shop about 11 Sunday morning, and we repeated the tests with both wheels jacked up. Nick called Bob Smith to discuss the symptoms. Bob said either spider gears, or ring and pinion gears could have failed. Bob said many of the differentials only had 2 spider gears, and he had seen many failures. So the next test was to determine if the failure was with the spider gears, or the ring and pinion. The Range Rover SE does not have a center differential, there is a viscous coupling that allows slip between the front and rear drive shafts. So we jacked up one of the front wheels to allow the front drive shaft to turn, and inserted a fuse in the BeCM to disengage the transfer case. Next we rotated both rear wheels in the same direction with the about the same speed. After a couple of revolutions, we knew the ring and pinion should be OK. The final drive is 3.85:1, so each revolution of the tire should cause the pinion to rotate 3.85 times, in the 2 revolutions of the wheel, the pinion rotated over 7 times.

Next was the discussion of how to fix the problem. Replacement spider and side gears are available for under \$200. However, this seemed like the ideal time to upgrade the truck by putting in an ARB Locker. The locker would be about \$1000, the ARB compressor another \$270, and about \$60 for the bearings.

Just as we were finishing, Nick noticed a strong smell of smoke outside the shop. Looking north outside the shop you could not see the other side of the valley. From east to west, there was smoke as far as you could see. The Witch Creek fire had started. Nick decided it was time to evacuate.

I called Atlantic British on Monday to order the parts. I ordered an ARB RD57 Locker, the ARB RDCKA air compressor, and 2 RTC3095 differential carrier bearings. However, Atlantic British thought I was ordering the wrong locker. The ARB application guide lists the RD57 for 1998 and later vehicles, and the RD56 for earlier vehicles. Since my Range Rover is a 1997 model, I accepted their advise and they shipped the RD56. (See technical note at end of article.)

The parts arrived on Friday, and by Saturday Ramona had been reopened (but you couldn't drink the water). We put the truck up on the lift, and started the disassembly process. The first clue was draining the gear oil from the differential. It was dark, thick, and sticky, and looked more like molasses than oil. (Don't get this stuff on your cloths. It does not come out in the wash.) Next, the driveshaft was disconnected, and hung out of the way. Then the brake calipers and ABS sensors were removed on each wheel, and the hub assemblies and axles were removed. Next the differential pumpkin was unbolted, and removed from the housing.

Now it was possible to inspect the damage. The gear teeth on the side and spiders gears had been worn down to the point where they no longer meshed. No teeth had been broken, it was just the gradual wear and metal abrasion due to lack of proper lubrication. Some teeth looked like they might have been chipped as a result of the clunking and lurching. Also the ring and pinion looked fine, so replacing the differential carrier with the locker would solve the problem.

Next it was over to the parts washer. All the gritty gunk masquerading as oil had to be removed. This stuff did not wash off very easily. It took a lot of scrubbing with brushes to clean all the hard to reach locations. We took off the carrier bearing caps. The pumpkin went back to the parts washer for more cleaning. The ring gear was removed from the carrier, and also went back to the parts washer for addition cleaning.

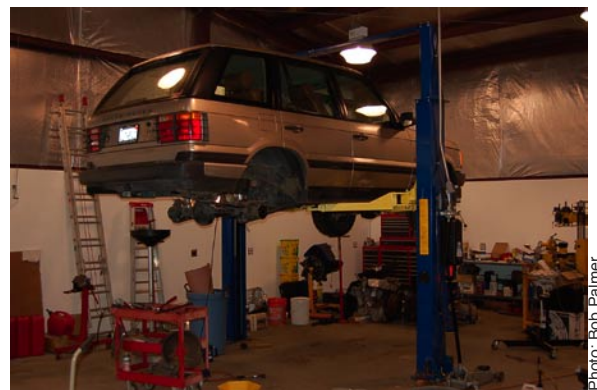


Photo: Bob Palmer



Photo: Bob Palmer

Photos:

Top: The Range Rover up on the lift with the rear wheels, axles, and differential removed.

Above: Worn gears in the old carrier.

The first step in installing the locker is to determine the location for the air line connector, and drilling the hole for the air connector. This wants to be on the top side the differential, and protected from damage as much as possible. It needs to be a relatively flat area on the pumpkin that can be drilled, and then tapped for the ¼ inch NPT fitting. The pumpkin was bolted to the drill press table, and the table adjusted so the hole would be perpendicular to the surface. It is very important to prevent any of the drilling filings from getting into the differential.



Photo: Bob Palmer

Next the bearings are pressed onto the locker. Since hot metal expands, the bearings were heated in a toaster oven. This makes installation easier, and in some cases the bearings will slide into place with very little pressure. The ring gear was bolted to the locker. Now the locker can be placed in the pumpkin to see how the ring and pinion will mesh. Adjustment nuts at each side of the locker adjust the left to right position, which determines the backlash between ring and pinion.



Photo: Bob Palmer

There was a large amount of backlash, and the locker was up against the opposite bearing support. The bearing support cap is a rough casting. We tried milling the cap to increase clearance. But the locker was also rubbing against the bottom part of the bearing support, and the adjustment nut was too far out of the bearing support. It became obvious that something was wrong. The first candidate was the locker. We found the answer on the ARB web site under the Air Locker Parts and Service documentation. On the RD56 page, there is a note that states the RD56 is for the non-traction control differential with a flange diameter of 174mm [6.85"]. For the traction control version with a 205mm [8.07"] flange, the RD57 should be used. After measuring the flange diameter, it was clear we had the wrong locker.



Photo: Bob Palmer

Monday morning, it was back on the phone with Atlantic British explaining the problem, and where the correct data could be found. They sent out a RD57 locker and new bearings, only charging the difference between the RD56 and RD57. The key thing here is that the ARB application guide data is incorrect, and does not mention the selection based on the flange diameter. All US specification Range Rover 4.0/4.6 have rear traction control, and 1998 on have both front and rear traction control. The ring gear bolts are the same, so if the bolts appear at the outer edge of the flange it will be the non-traction control version. The traction control flange is 1.22" larger than the non-traction control flange. So the ring bolts will appear to be inset further from the edge of the flange. This can be seen through the oil fill plug on the differential housing, so a first level check can be performed without removing the pumpkin.

The difference appears to be that the traction control differentials use a thinner ring gear, so the carrier flange is shifted toward the center of the differential, and the flange is larger to provide more backing support for the ring gear. A spacer plate is also available, but longer ring gear bolts would be required.

The new locker and bearings arrived, and work resumed the following Saturday. The bearing were more difficult to install this time, and had to be pressed on using a hydraulic press. Next the ring gear was installed, and the locker positioned in the pumpkin. This time everything fit properly. We didn't measure the ring gear backlash before disassembly, and the P38 doesn't appear to have published specifications. We used the same backlash as for a D90, which is published.

The backlash is about 6 to 10 thousandths of an inch. The carrier has adjustment nuts on each end.

Photos:

- Top: Drilling the pumpkin for the air line connector.*
- Middle (2): Locker with ring gear attached on the bench, and resting in the bearing supports.*
- Bottom: Routing the air line.*



Photo: Bob Palmer

Tech Tip: Mallory Distributor Replacement

By Dennis Yard

Recently I discovered by accident that the Lucas ignition coil on my 110 was failing. My truck would not start one morning a couple of days after being picked up from a local repair shop for minor repairs not related to the ignition system. The truck would turn over strongly but it wouldn't "catch". My first act was to open the hood and give a visual inspection to see if something in the ignition wiring had loosened up during the prior work.

To my dismay, I immediately noticed that the ignition coil, which has the terminals pointed downward, had a black tar-like substance extruded on the attached wiring. Upon removal of the coil bracket from the wing mount I found that nearly the whole top was encased in this "tar". With a screwdriver, I chipped off the material and found that it was being extruded from the coil body from under the black plastic cap on this coil style. Evidently the coil was overheating thus causing the insulating material inside to be squeezed out.

I replaced the coil with another Lucas spare from my '95 Disco and started the truck. It started after a few efforts to crank it over. I drove it around the neighborhood to see how it acted. Upon return to the house, a check of the replacement coil showed that it was too hot to touch!

I put out an email to local San Diego Club members, one of whom instantly recognized the fault as being caused by failure of the ignition amplifier module which is mounted on the side of the Lucas Model 35LM8 distributor. It had not been moved off the distributor body to the wing bracket per a Land Rover service bulletin recommendation. The relocation evidently was to keep it from cooking from due to engine and manifold heat.

After some discussion as to whether to replace it with Genuine kit or to use a more modern replacement, I decided to go with a US made, modern optical distributor. I chose the Mallory Model #4768901 with matching Model #29219 ignition coil and Model #700 ballast resistor. The distributor is a "47" Series with vacuum advance. In this case I chose reliability and parts availability over originality. This is because I would like to have more peace of mind when using the 110 off-road or longer trips.

The Mallory Model #29219 is designed for use on the Rover V8. It has a billet turned aluminum body, ball bearing support of the distributor shaft, optical (no mechanical parts or points) triggering of the spark and sealed electronics. It is a simple three wire hook up, with no modifications to the truck required, other than adding the ballast resistor to the coil bracket mount.

The tricky part is make sure that the truck is set up correctly at Cylinder #1 TDC when taking out the old distributor so you can properly align the new one to the oil pump drive and cam drive gear when putting in the new one. These things are well described and illustrated in the Mallory instructions.

The hardest mechanical issue is to drill the new Mallory shaft to install the gear drive from the Lucas shaft. This requires removing the drive and fitting it with correct end-float to the undrilled new shaft.

This requires a solid drill press with suitable mounts and clamps to correctly align and drill the hole for the roll pin. (Note: this applies to the separate parts as purchased from Mallory marketers (like Summit Racing.) You can buy a kit from Atlantic British that for an extra \$100+ which has the drive gear already installed.)



Photo: Lucas coil leaking black tar



Photo: Mallory distributor, coil, and ballast resistor



Photo: Step 2 - Marking cylinder 1 orientation



Photo: Step 2 - Marking cylinder 1 orientation

Here is a general description of the procedure:

1. Turn off the battery cutout switch under the driver seat box or disconnect at battery(s).

2. Per the Mallory instructions, set up the static ignition timing such that Cylinder #1 is firing at 6 degrees BTDC. With battery power turned off, remove the coil wire from the distributor cap and trace the wire from Cylinder #1 (right-side front cylinder - when looking from the front of the engine or drivers' side in USA) to its matching distributor cap post. Open distributor cap and mark where the distributor rotor is supposed to hit the #1 wire. Tip: hold back the flopping cap clamps with a rubber band to keep them from getting in the way.

3. Leave the plug wires on the old cap if you want to, but it will get in the way of following work. Mark wires if you remove them or be clear on which cylinders are which. The factory workshop manual has a description of the firing order, location and distributor cap cylinder order (clockwise rotation).

4. Climb under truck and with a deep socket slowly turn the crankshaft pulley nut clockwise (as seen from the front of the engine) until the crankshaft pulley mark is 6 degrees BTDC. Make sure that the rotor is at the #1 cylinder firing position (approximately 5 o'clock position when looking down on the distributor from the front.) This is easier with two people.

5. At this point remove the old distributor by loosening and removing the nut and clamp plate under the distributor body. This works best with a floppy "Gear Wrench" style ratcheting wrench. Remove the ignition coil from its wing mount. Tip: Mark wires, especially the white wire with black stripe that goes back towards the firewall and eventually to the ECU computer. This is the ignition signal that tells the ECU to inject fuel into the cylinder. No fuel injected = no start.

6. Pull the distributor body from the engine. Be careful not to disturb the gunk surrounding the distributor so it falls into the camshaft/oil pump drive well. Note the location of the oil pump drive tang at the bottom of the well. It may have to be adjusted prior to the reinstallation of the distributor shaft. This is noted in the instructions.

7. Per the instructions, remove the roll pin from the old shaft and slip the cam gear and oil pump drive assembly off the shaft end.

8. Per the instructions, dry assemble the gear assembly to the new shaft with correct 0.020" end float. Tip: use a 0.020" thick shim washer instead of a feeler gauge to provide the necessary end float when the new shaft is drilled. Just be sure to remove it before reassembly of the gear assembly on the new shaft. Again, use a rubber band to keep the cap clamps out of the way.

9. This dry assembly is to ensure that the proper end float allows for oil to get to the shaft. At this point the shaft is drilled with the matching new hole. Be careful on drill selection to match exactly the roll pin hole diameter so there is not excessive play or too small a hole.

10. See pictures for the clamping arrangement used to prevent slippage of the parts while being drilled and maintaining proper alignment.



Photo: Step 6 - Distributor mounting hole in block



Photo: Step 6 - Lucas distributor removed

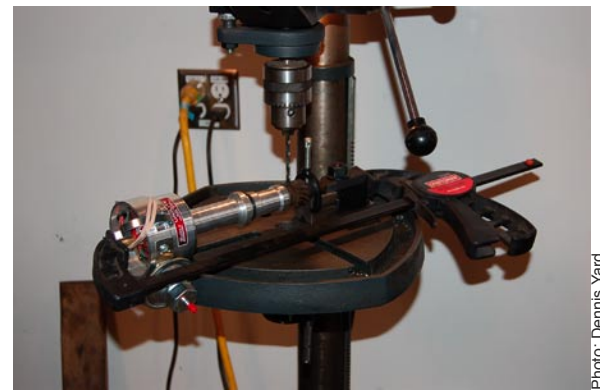


Photo: Step 10 - Drilling the shaft for the gear pin



Photo: Step 10 - Drilling the shaft for the gear pin

Mallory Distributor Replacement from Page 5

11. Upon completion of the drilling step, remove the end float 0.020" shim from the shaft and assemble with the roll pin. Now you have a complete distributor assembly to be placed in the engine. There will be a little play in the shaft up and down due to the 0.020" end float.

12. Next note the position of the oil pump drive socket on the end of the gear assembly. You may have to manually rotate the matching tang at the bottom of the well to be close to its positioning. You will likely need really long needle nose pliers to adjust. This is important since it will determine if the distributor seats all the way down and engages the oil pump drive and camshaft gear.

13. Also, you will want to have the Mallory rotor in the same position against the body and cap as on the Lucas version. i.e. the #1 firing point just one terminal counter-clockwise of the cap clip mount. In other words, the new distributor relationship will be similar to the old one. The new distributor vacuum advance mechanism will be in roughly, but not exactly the same, position relative to the engine as the old one.

14. Carefully insert the distributor shaft into the well with the rotor pointed several degrees (counterclockwise) prior to the final estimated position. This is to account for the gear spiral teeth. You may have to try this a couple or more times to get the right gear tooth engagement, as well as the correct oil pump tang engagement at the bottom. If the stars and the gears align well you will end up with the shaft seating into the cam gear and oil pump tang with a satisfying thump.

15. Loosely replace the clamp and nut on the engine.

16. Adjust distributor body as necessary for proper alignment with the rotor. Tighten clamp nut to allow some movement of the distributor body. This is so it can be adjusted dynamically when the engine starts.

17. Now install the coil and ballast resistor. There are only three wires from the new distributor. The Mallory instructions are clear on the locations, be sure to keep track of the positive and negative terminals on the coil. You will have to make up your own jumper wire from the ballast resistor to the coil, this does not come with the kit. See photos for connections.

18. Now is the time to move the ignition wires from the old cap to the new cap. Using the maintenance manual (Section 86) as a guide, place each wire in the correct rotational location on the distributor cap and its mating sparkplug. Odd numbered cylinders are on the driver's side 1-3-5-7 and even numbered 2-4-6-8 on the passenger side. This front of engine to back. The rotational locations are 1-8-4-3-6-5-7-2.

19. If all is well, turn on the battery power switch and try to start the engine. If the engine is correctly statically timed, then it should start. Once started, the exact timing can be set using a timing light or similar device. Once correctly set, the locking plate nut can be tightened and the timing checked again to ensure it remained correct.

20. With the electronic ignition, it is imperative to use premium plug wires with RFI suppression. Carbon or metal cored wires will cause the system to malfunction.



Photo: Dennis Yard

Photo: Step 14 - Installing the new distributor



Photo: Dennis Yard

Photo: Step 16 - Initial distributor timing alignment



Photo: Dennis Yard

Photo: Step 17 - Installing the coil and ballast resistor



Photo: Dennis Yard

Photo: Project completed

Differential Replacement from Page 3

These nuts control the depth of engagement between the ring and pinion gears, which determines the backlash.

Next the air line is fitted. The air collar fits over the carrier shaft, and is attached to the adjusting nut. An air passage in the carrier shaft delivers the air pressure to the locking mechanism. The air line must be routed to the connector with clearance away from any moving part. The adjustment nut locking pins were set, and the pumpkin was ready for reassembly.

When exchanging the lockers, I had also ordered new axle seals. Removing the old seals allowed swabbing the axle tubes to remove the gritty residue. The old gasket material was cleaned off the differential housing, and the differential housing and axle tubes were thoroughly cleaned. With the new seals in place it was time to install the rebuilt pumpkin.

Permatex the Right Stuff® is used to form the gasket between the differential housing and the pumpkin. A bead of the elastic rubber material is laid down all the way around the differential housing. The material sets up in about a minute, so the pumpkin is quickly inserted, and bolted up to the housing. Next the axle and hub assemblies are reassembled. The right side (long) axle fit perfectly. But the left side (short) axle would not go in all the way, so the hub would not mate up against the axle tube flange.

Joe had experienced this on his Range Rover also. The solution is to machine about 0.100 inches off the axle flange that sets the axle position relative to the hub. It appears the effective depth of the splines on the current Land Rover axle are not deep enough for the locker. So now we had to remove the axle from the hub. This should be floating, held in place by the axle nut on the outside of the hub. However, we could not get the axle nut off, even using in pneumatic impact wrench. Nick ended up buying a bigger impact wrench, and after a minute of pounding the nut finally came free. But the axle still would not slide out of the hub. Land Rover axles are supposed to be field replaceable, but we were having problems working in a shop. We took the axle and hub over to the 12 ton hydraulic press, nothing moved. Next we sprayed penetrating oil on the axle, and hub, and trying pressing again. Still nothing. Finally we got out the torch to heat up the hub. This is risky, because we didn't want to damage the wheel bearing in the hub. Finally with heat, oil, and 12 tons of pressure the axle broke free from the hub and we were able to press it all the way out. Between rust, and the red Loctite that the Land Rover manual says to apply to the axle

Continued on Page 8



Photo: Bob Palmer

Photos

Top: Differential housing

Middle: Using heat to press the axle out of the hub

Bottom: Rust and red Loctite on the hub axle splines

Left: Machining the axle flange



Photo: Bob Palmer

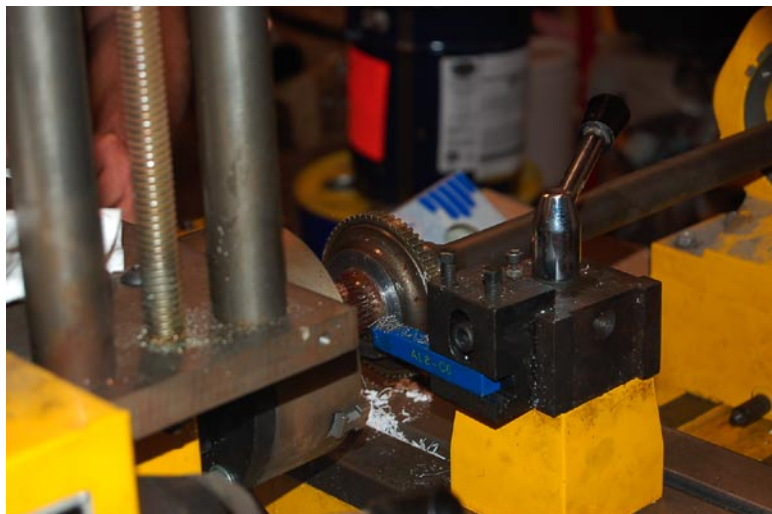


Photo: Bob Palmer



Photo: Bob Palmer

Differential Replacement from Page 7

splines passing through the hub, a seemingly simple step became very difficult. Now we could take the axle over to the lathe, and machine 0.100 inch off the flange. Needless to say, we did not apply Loctite when reassembling the axle and hub.

Finally, the axles were reinstalled, and checked to insure nothing was binding. Now the drive shaft, brakes, rotors, and traction control sensors could all be reinstalled. Machining the axle did not cause a problem for the traction control sensor. The traction control ring is shifted slightly to the outside, but still well within the opening for the pickup sensor. The differential was filled with oil. Since lubrication was the cause of the failure, the front differential was also drained and refilled with fresh oil. Valvoline synthetic 75W-90 gear oil was used.

The next step is to mount the air compressor, and run the air line from the compressor back to the differential. The compressor was mounted on the right wheel well next to the engine compartment fuse block. In right hand drive versions, this area would have some of the brake system components. After mounting the compressor, the air line was run from the differential up to the engine compartment. There are several other brake and gas lines that run along the right side of the vehicle between the body and the top of the frame. The air line was run along this route, and tie-wrapped to the other lines to keep it in place.

The final step was the electrical control lines. The compressor has a relay that is powered directly off the battery, but the control wiring must be brought through the firewall and into the dash where it can be easily reached. An unused plug through the firewall was found behind and below the radiator expansion tank. The control wires were routed through this plug, and then underneath the center console. The ARB supplied switches are rather large, and it would be difficult to integrate 3 of these switches into the dash. So miniature toggle switched with separate indicator lights were used. The switches and indicator lights were mounted on a flat part of the instrument cluster bezel in front of the trip odometer reset button. This is out of the way for ordinary driving, but easily accessible for off-road use. The ARB wiring harness had an activation order that had to be preserved, but this is easy to deduce from the wiring diagram. The first switch activates the air compressor, and allows activating the first (rear) locker. If the compressor is not activated, the locker solenoid will not turn on. The second switch activates the first (rear) locker, and allows activating the second (front) locker. You can not activate the front locker, unless the rear locker is also engaged.

The installation was complete, and the Range Rover was ready for the trails that lay ahead.



Photo: Bob Palmer

Photos:

Above: ARB Compressor mounting and air line

Below: Compressor and Locker control switches



Photo: Bob Palmer

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LRCSD Board of Directors

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Technical Note:

ARB has updated lockers for the Land Rovers, and many other vehicles.

The RD56 is replaced by the RD128, and the RD57 is replaced by the RD138.

From the parts drawings, some of the noticeable differences are the shape of the carrier housing, and the air line now goes to the flange end of the carrier.

Coyote Canyon from Page 1

is not a difficult hill to climb in a stock Land Rover. The key is to pick a line that avoids cross axle situations, even if that line looks more difficult due to the rocks. With the line chosen, we started guiding the drivers up the hill one vehicle at a time. After getting to the top it is mostly smooth sandy trails over to Sheep Canyon where we stopped for lunch.

The return trip was not as easy. Bob was following Jaime down the rocky hill. It seemed that Jaime had his wheels pointed the wrong way. It turned out that he had snagged a rock with his track rod, and now had a very severe toe out problem. His left tire was pointed 40 degrees to the left, while the right tire was pointed 40 degrees to the right. To make matters worse, there was a group of Jeeps following us down the hill, and another group trying to go up. We were stuck in the middle, and no one could pass us.

Everyone from the other groups were offering suggestions that did not work. Then they wanted us to drag Jaime back up to the top of the hill. We were already half way down, and did not want to do that, since we needed to get his truck off the hill. We ended up winching him down the hill, with the winch setting the track we wanted the truck to follow coming down the hill. When we got his truck down to the clearing at the bottom of the hill, we removed the track rod, and tried to straighten it. But as soon as he hit a bump the track rod bent again.

When we got back to pavement, we called Nick to see if he had any ideas. Nick had a used spare stock track rod, and a new heavy duty after-market track rod for the Disco I. It had taken a long time to get off the trail, and we had to slowly limp back to the gas station on the east end of Borrego Springs. By now it was dark. We removed the damaged track rod, stored all the supplies Jaime had on his roof rack, secured the vehicle, and headed over to Nick's shop in Ramona. Jaime got the heavy duty track rod and new ends. Then Rick and Paul took Jaime back to Borrego Springs, where they installed the new track rod, and did a rough wheel alignment to get the truck drivable. It was midnight by the time it was all done, but it ended up being another successful trip.



Photo: Dennis Yard

Photos:
Above: Coyote Canyon in Anza Borrego DSP
Below: Water crossing with very little water



Photo: Bob Palmer

President's Message from Page 1

of weeks. See the announcement at <http://www.lrcv.com/Calendar.aspx>. This is a one time commitment ending with the event.

Club 10th Anniversary Event Committee Members: Two or more persons will conduct event planning, including type of event, event location, budget and set up. Committee members will coordinate with the Board on fees and payments, as well as any special commemorative items. This is a one time commitment ending with the event. Some research has already started.

Your time and energy will make a mark on the advancement of the Club and the enjoyment we will take away from it. You can email me or the Board with any questions you might have on these positions.

Happy Roving,

Dennis Yard

As always, we want to thank Land Rover Miramar in San Diego, its management and staff, for their continuing support of our efforts and also for the generous financial considerations that they have extended to our membership.
Thank you very much!

MEMBERS: Be sure to take advantage of your 15% CLUB DISCOUNT in both the parts and service departments at

Land Rover Miramar

Service is now open from 7:30 AM to 6:30 PM Monday through Friday.



9455 Clayton Drive
San Diego, CA 92126
858.693.1400

2008 CALENDAR OF UPCOMING EVENTS

Dates and events subject to change. Normal monthly informal meetings are on the third Tuesday of the month.

Non-LRCSD events in italicized print.

Feb	15-18	Fri-Mon		Mojave Road Trail - Easy scenic trail for high clearance 4x4 trucks. 139 miles through the Mojave Reserve from the Colorado River near Laughlin to Camp Cady near Barstow.
	<i>16</i>	<i>Sat</i>		<i>Calico Cleanup http://calicocleanup.com</i>
	19	Tue	06:30 PM	Monthly Informal Meeting
Mar	15-16	Sat-Sun		Desert Run - Anza Borrego/Truckhaven
	18	Tue	06:30 PM	Monthly Informal Meeting
Apr	4-6	Fri-Sun		Rover Rendezvous 8 - Panamint Springs Resort (Death Valley). Hosted by LRCLV (Las Vegas) http://www.lrclv.com/Calendar.aspx
	12	Sat		Land Rover Mission Viejo Open House
	15	Tue	06:30 PM	Monthly Informal Meeting
	18-20	Fri-Sun		Arizona Trails
May	18	Sun		SD County Wine Tour & BBQ
	20	Tue	06:30 PM	Monthly Informal Meeting
Jun	17	Tue	06:30 PM	Monthly Informal Meeting
	21-22	Sat-Sun		Miller Jeep Trail
Jul	15	Tue	06:30 PM	Monthly Informal Meeting
	19-20	Sat-Sun		Big Bear
	TBD			LRCSD 10th Anniversary Event

LAND ROVER CLUB OF SAN DIEGO



P.O. Box 502816
San Diego, CA 92150-2816

DATE SENSITIVE MATERIAL
Address Correction Requested