



The SLO 4-Wheeler



Volume 18, Issue 2

March / April 2012

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Garcia Ridge Trip Report

Written by Eric F.

The Santa Maria 4 Wheelers put on a run to Garcia Ridge on Sunday January 15th. The SLO 4 Wheelers were sent out an email invite through Eric via email.

Members of the SLO 4 Wheelers met up at the Pozo ranger station around 10:30 AM. We all aired down our tires, disconnected sway bars, etc as necessary. From there the SLO 4 Wheelers met up with the members of the Santa Maria 4 Wheelers at the summit of High Mountain Road and the Garcia Ridge Trailhead. There were a total of



Kevin and his Toyota

11 rigs present. The group lined up. We made our way up the beginning of the trail. The trail is getting pretty rutted from last year's rains and use from the summer. One of the SLO 4 Wheelers radioed over his CB that he was turning around and going back as the trail was getting overgrown and that member did not want to

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2012 SLO 4-Wheelers Officers

Officers:

President: Tom B.
 Vice President: Dave F.
 Secretary: Ken B.
 Treasurer: Devin L.
 Board of Directors (includes officers):
 Ways and Means: Ken B.
 Membership Director: George W.
 Events Director: Matt J.
 Land Use Liaison: Dave F.
 CA4WDC Liaison: Matt J.
 Social Chairperson: Mike G.
 Newsletter Editor: George W.

Committees:

Safety Chairperson: Dave F.
 Promotional Chairperson: Randy P.
 Virtual Club Scrapbook: Mark B.
 Archived Scrapbook Randy P.
 Virtual Committee: Mark B.
 Adopted Trails and Campgrounds:
 Garcia Ridge Trail: David F.
 Pine Mountain Trail: Mark B.
 La Panza Camp Ground: Kirk R.
 Carrizo Plains Land Use Randy P.

Newsletter submittals
 by two weeks before the
 next issue to George

Member Rigs: Cherokee Axle Upgrades



by Eric F.

NOTE: All photos are Eric's photos.

After a few years of wheeling with big tires, a few jumps at the dunes, rock crawling, I had noticed my front wheels were leaning inward. Negative camber. I had installed a set of offset ball joints a couple of years back to compensate for the need for more caster. I also re-clocked the ball joints to gain some camber.

Well I was at a point there was no compensating for bent knuckles or housing. It was time for some major repairs.

Before I did the repairs I spent a lot of time reading the forums on the Naxja web site. One thing I wanted to do was do some type of bracing the help prevent axle bending. I found all sorts of articles from easy home made bracing pieces to extensive custom made axle trusses and all ready pre made weld on braces and inner tubes trusses. I also found a few articles on doing an over the knuckle steering conversion.



Turns out I had a **heavy duty Rusty's** steering system that was designed to go either below or above the knuckle steering. Step one is done.

Step two: Find a newer style non disconnect high pinion housing. After a few phone calls Dave Faucet had a good housing. Dave brought the housing over and I went to

work gutting the housing and cleaning it up.

I ordered up all the parts after i decided on what i wanted to do. I found lower weld on knuckle braces and center housing to right link arm brace and sway bar mounts and new high mount track bar **mount from Rusty's Off Road**. I also ordered the tie rods inserts from Go-For-It Off Road to do the over the knuckle steering conversion. I also ordered up inner axle tube truss from Poly-Performance.

After receiving all of my parts I went to work doing the mods I needed to do. I had to cut off the old sway bar mounts. I also had to extensively cut the coil spring plates to make room for the over the knuckle steering conversion. The old track bar is pretty much cut off except one small part. The steering dampener bracket had to be cut off. I also had to drill out the knuckles where the tie rods would normally go.

I test fitted all of the external axle braces and ground away all of the paint. I also test fitted the internal axle tube braces and drilled holes in the tubes as these plug welded. I took

the axle housing over to Bob O.s house and Bob welded on the knuckle braces, center external housing brace, internal axle tube trusses, tack welded the steering inserts and tacked welded on the high mount track bar mount.

A coat of hamber black paint and it was time to remove and gut my old housing from the jeep. After a couple of hours of work my housing was out and gutted.

When taking apart the old diff I found worn axle u-joints. I ordered up and replaced my u-joints with a set of precision heavy duty hardened u-joints. I the installed my ring and pinion which includes 4.56's with a stock carrier with an Aussie locker installed and my chrome alloy axles. I installed the new to me and braced up axle in the jeep. Installed the axles.

I also swapped to the 91 and later rotors, hubs and calipers and pads. I also found



that the 91 and later pads are about 1/4 to 1/2 inch longer, which equals more breaking area.

I installed the steering linkage and set the toe. I cut and modified my track bar. The old track bar went from the left frame rail to the lower right side of the axle. The new location is from the left frame rail to the upper portion of the right axle. I then took the jeep over to **Bob's house where he finish welded the track bar mount and welded on the sway bar mounts.**

I also note that the steering damper has to be relocated. The first location was from track bar mount to drag link. On full upward flex it would have hit the oil pan. Second and final mounting location



old track bar mounting hole to center tie-rod.

In driving the jeep after all the mods I did, I found there was what I thought

was quite a bit of steering slop. I also found the jeep to wander quite a bit. A few more tech articles read, I needed to buy or make a urethane or some type of plastic spacer. The over the knuckle steering I have is called a t style steering and one of the draw backs is tie rod roll. I ordered a spacer from JCR Off Road and removed the right tie rod boot and installed the spacer. I road tested and no more slop in the steering.

I took the jeep to work and checked the alignment. No wonder the jeep wanders. **The spec's call for 6 to 7 degrees of caster.** I had about 2-1/2. I shortened my upper control arms and that added some caster. The jeep handles a lot better now.

I took the jeep to Garcia ridge. I found that off road ride and handling and the flex of the suspension the be awesome.

The final question is would I do all of these mods again on another jeep or recommend them. I would do everything except the over the knuckle steering if this is a daily driver. i did gain at least 3 inches of clearance by relocating the steering and track bar.

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damage his vehicle.

We made our way through the trail finding enjoyment climbing obstacles that are becoming bigger each year from the rains. Some one radioed jokingly over there CB "hey no one told me there would be rocks."

We got to the down hill split. Of course Dave F. had to take the hard way down and dropped down the rocks where he almost went end over end last time he was there.

We made our way through the rest of the trail getting beat up by the over grown brush. We made a few picture taking stops. The day was clear with a few wisps of clouds. The temperature of the day was perfect.

The group made its way to the picnic bench and stopped and ate lunch. During lunch break someone mentioned Pozo Saloon. Most of the group that did not have any plans agreed that we would go the Pozo Saloon.

After lunch we made our way up the trail with some stops to take pictures and watch others climb up some of the newly exposed obstacles. We made our way further up the trail to the area we call the play area. Several rigs attempted the rocks. A couple made it up and couple did not.

Then several decided to go up the mini stair steps. All of those who attempted it made it up the steps. From there, we made our way to the trail head. Those who had plans, headed down

High Mountain Road. Those who did not have plans, went to the Saloon where ate more and some had Pozo Martinis. All-in-all, it was a great day of wheeling.

Eric F.

Members present:

Eric F.

Dave F.

Kevin C.

Casey ?

Santa Maria cub:

Dwight and Lynda P.

Jason & Wendy V. and girls

Brian C.

Mike J. & Karma the dog



Clunk Thunk Clackety Click!

When I have a problem I cannot diagnose, my first call is to Bruce at Bogart Engineering. He has helped me solve many issues by tracking down the sound. I persuaded Bruce to share his



knowledge with us.

You're driving home after a great day of off-roading and notice a new noise coming from somewhere in the Jeep. Dayum. What the heck is that?

Well, as off-roaders we are always seeking new challenges. One of those challenges that's a little unwelcome is the appearance of those new noises. You wonder what's going to happen. Will the motor quit and leave me stranded? Will it suddenly steer itself off the highway?

So you pull off the road and open the hood. You look inside. Yep, the motor is still there. Good. You look under the vehicle. Nothing hanging down. Now what? **You call a friend who's a good mechanic.**

"What does it sound like?" he asks.

You answer as intelligently as possible **"Clackety clackety clack"**.

He replies **"Sounds like the clacker to me. Better have it towed."**



We don't want this scene, do we? Well, I'm gonna tell you how to identify what's happening in your vehicle and how to better communicate remotely with your buddy the mechanic.

The Source of a Noise

The source of a noise is identified by a combination of characteristics and a process of elimination: Speed (frequency)-under what circumstances does the speed of the noise increase and decrease?

1. Does it speed up in direct relation to the road speed of the vehicle? Wheels, brakes, axles, differential, and driveshaft speeds are in direct relation to the speed of the vehicle. The driveshaft spins about four times faster than wheels and axles.

2. Does it speed up and slow down depending on which gear the transmission is in? The engine (along with the accessories; alternator, water pump, power steering, and air conditioning) and transmission speeds are relative to the gear you're in.

3. Does it happen when the vehicle is sitting still with the motor running? If yes, then it can only be in the engine and accessories or transmission input. What happens when you depress the clutch, thus eliminating the transmission input? Further narrow it down by speed relative to the engine rpm. The rotation of the crankshaft and travel of the pistons define the speed of the engine. The valve train (tappets and rocker arms) runs at half the speed of the engine. The accessories vary according to pulley size.

Nature of Sound

1. **Is it a result of impact? "Tapping" or "Banging" would describe two solid metallic parts directly impacting each other.** These are usually fairly easy to identify since there really aren't many places that can happen. In the engine, the pistons can directly impact the head or crankshaft, and the rocker arms and associated valve train can have direct impact. Since the valve train operates at half the speed of the engine, you can hear a difference in speed and narrow it down. (tip: remove the oil filler cap in the valve cover and listen to the valves operate to hear half-engine speed) **If it's in the en-**

gine or accessories, it'll happen with the vehicle sitting still and the motor running. If it happens while you're driving, note if it's aggravated by bumps and which corner hitting the bump aggravates it most.

2. **Does it squeal? "Eek-eek-eek" would describe a rotational noise that's metal-on-metal. Usually it's a bearing. The rate of change of the speed of the noise (as well as your directional hearing sense) will point you to the location of the bearing. So if it's a road-speed eek-eek, it's probably a wheel bearing. An eek-eek that varies with engine speed is probably an accessory bearing, often the alternator. A word of caution here: bearing eek-eeks often disappear when the bearing gets hot, so the disappearance of the eek-eek is not a good sign.**

3. **Does it thunk? They're usually isolated and not regular. If you can make it thunk by hitting a bump with a certain corner of the car, it's a shock absorber. If you can make it thunk by hitting the throttle, it's a motor or transmission mount. If it thunk-thunk-thunks at road speed, you're probably losing a tire tread.**

4. **Does it click? Chipped or broken gears click. Transmission or axle gears, depending on where you hear it coming from.**

5. **Does it whine or even howl? Feed it or leave it home the next time you go out. Gears whine too. Usually the sound will change significantly on-throttle versus off-throttle. That's never a good sound, but check yer freakin' fluid level where the noise is coming from now! You've probably sprung a leak or gone dry. If you do it RIGHT NOW you might save those gears!**

6. **Does it pop? Pops are the result of explosions. IE, valves in the engine open at the wrong time or not opening at all. Often accompanied by tapping because of a rocker arm problem. It can pop out the intake or exhaust end. Either way, it's a pretty serious engine problem. UNLESS...one of your joker friends swapped some spark plug wires while you weren't looking. Death threats often uncover or cause such behavior.**

7. **Does it vibrate? Everybody knows**

the vibration of a flat or out-of-balance tire. How about a vibration at four times **that rate? That's probably a driveshaft, bent or with a bad u-joint. Usually isn't accompanied by noise, but we'll include it**



here, and who could hear it anyway over all the other squeaks and rattles and flapping of the top?

TIPS:

- o Place a long screwdriver, dowel, or

mechanic's stethoscope (get one on your next trip to Harbor Freight) against your ear and the various parts of a running engine to hear normal operating noises. Try the valve cover, crankcase, alternator, power steering pump, and air conditioner compressor. Caution: Don't touch any moving parts or wiring!

o Tie a piece of nylon strap to a u-joint yoke just long enough to strike a frame rail, spring, exhaust pipe, or other part, **and drive a bit. You'll hear it slap against the part at about 4 times road speed.** You may have to turn off the motor and coast to hear it. You can do this with a strap tied to a wheel spoke to hear road speed rotation. Keep it fairly slow or the strap will just coil up.

So to summarize, now you can call your **mechanic and tell him: "I've got a four-times road speed eek-eek in the rear. Whaddyathink?" To which he can reply: "Sounds like a bad pinion bearing. Check your gear lube. Drive slow with steady**

throttle. Watch for leakage at the rear of the driveshaft. If it gets worse, get it **towed. Bring it to me in the morning."**

Bruce Bogart, AKA "Pappy", has been swappin' lies around the campfire for over twenty years. He's the inventor of the Plugzit and Starterita. After 45 years with cars of every description and ten trips across the Rubicon, he's surely heard every bent and broken part imaginable. Although he's become something of a recluse, he still enjoys hearing new lies



Club Meeting Minutes:

Meeting Minutes by Ken B., Club Secretary

February 2012:

SLO 4 Wheelers 2/1/2012 minutes from the meeting

7:00 p.m. Meeting called to order

President — Tom B. started the meeting with introduction around the room.

Vice President — Dave F. did not have any VP type news but did have a trip report from Garcia ridge see front page of the news letter for all of the details

Secretary — Ken B. needs current account balance to finish budget / I will be setting up a year calendar to bring to the meetings to help with event planning.

Treasurer — Devin L.-F. needs to get the bank stuff changed over / Pres. Will talk to the bank and try to bring signature card to the next meeting.

Ways and Means — Ken B. If the club would like to raise money for any

reason lets decide what it will be for and how we will go about raising it. I will be happy to organize once we have a plan.

Membership — George W. 26 paid members for 2012 so far / our club goal is to match last year at 60+ members

Newsletter — George W. asks PLEASE bring him articles / trip reports, rig **how to's, projects, member rig review**, anything the club would have interest in.

Land Use — from Dave F. Lloyd from Santa Lucia ranger district said it would be helpful if we as a club would record any trip in Los Padres NF as trail maintenance because any time we go out we do something of that nature on the trails. Needed # of rigs / # of people / dates and times

Cal 4 Wheel — Nothing to report / Matt J. will check with Suzy by email

Safety — Dave F. found and brought the first aid club bag for any trail leader to use at any club event.

Virtual Committee — Web site / lets update the club rigs page send Mark B. info directly by email thanks

Trail Maintenance — Garcia ridge **needs attention / possible joint effort** with Santa Maria 4x4 club (possible work day 4-14-12) Pine Mountain. Needs pre run to asses needs possible after the meeting run?

New Business:

Banner: Matt J. is waiting for Mark B. and George W. to tweak the art work

Matt J. is going to try and contact previous semi current members to remind them about the club and all the cool stuff that is in the works for this year.

NFS Ranger Lloyd was added to the club email just to be more in touch with what we have going on

EVENTS:

After the meeting run starting at Turkey Flats Saturday, contact Dave Faucet.

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February — Possible end of the month snow run to Bald Mountain.

March — Hollister Hills OHV weekend run date not set / Red Rock ?

April — Calico Ghost Town run w/ Sons of Thunder

May — 12th Spring Fling club BBQ

June —

July — 4th Templeton Parade?

August — 25th weekend Coyote Lake club trip

50/50 — Jim B. was the lucky winner / He donated back to the club

March 2012:

Standard INTRO's @ 7:00pm

Vice President — Dave F. proposed trail maintenance for Garcia Ridge sat April 14th meet at ranger station 9:00am

Safety — Dave F. / Be safe / when in doubt get out and look / if you need the club kit contact Dave

Treasurer report — Devin L./-F. balance is \$1,390.00

Secretary's report — Ken B. nothing

Membership — George W./ 37 paid members

Membership call duties for a reminder to renew

Kurt R.: Last names ending A-C

Tom B.: Last names ending D-Z

Events — No Matt J. in attendance

Hollister march – April ?

Garcia ridge work day April 14th

Spring fling May 12th

Coyote lake club run Aug 25th weekend

Newsletter — George W. / please send him anything to work with for the letter by 17th of march

Merchandise — Randy P.:

Shirts available

Sweatshirts pre order 25-30 possible is there interest?

Stickers small 5.00 large 10.00

License plate frames 250 @ .87

Dave F. Made motion to order license plate frames / Kurt second vote passed

Land Use;

Pine Mountain – Mark B. / He has not been up to check it out (He needs motivation to fix the jeep)

Eric F.. — Proposed after the meeting run up Pine Mountain to check it out see flyer 30" tire with one limited slip min for run

La Panza Camp Ground — Kurt R. has not been out to check it out yet

New Business:

NEW MOTION for banner

Eric F.motion for Randy P.to proceed with getting the club new banners / Second Dave F. / vote passed.

Info on flags and tire covers with club logo / Randy P.

Business cards: Do we need more? Discussion for next meeting.



SLO 4-Wheelers contributes to and/or is a member club in these organizations. Visit and support, -they are working for US!

<http://www.sharetrails.org/>



The United Four Wheel Drive Associations also acts as your voice to keep 4x4 roads and trails open so that we can continue enjoying four wheeling in the great outdoors.

<http://www.ufwda.org/>



A varied group of outdoor recreationists who are extremely active in promoting the positive aspects of vehicular access on public lands and protecting that right.

<http://www.corva.org/>



SLO 4-Wheelers is also a member club in the California Association of Four Wheel Drive Clubs (CA4WDC) If your not a member, check it out,

<http://www.cal4wheel.com> or ask Suzy



Advance Adapters Inc.
4320 Aerotech
Center Way
Paso Robles, CA 93446
Phone:805-238-7000
(Toll Free:800-350-2223)

<http://www.advanceadapters.com>

It's Still Membership Renewal Time!

Please complete this coupon and mail it with your check for \$20.

Remember, you can only vote in the January elections if your membership is paid up into the new year!

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ email: _____

Please indicate your Newsletter Delivery Preference:

- Link to PDF (Color) via email Hardcopy (black & white)

Send completed coupon along with a check for \$20 made payable to "SLO 4 Wheelers" to:

SLO 4 Wheelers
 PO Box 2271
 Atascadero, CA 93423-2271

It's Cal 4 Wheel Membership Renewal Time!

Please complete this coupon and mail it with your check for \$45.

No check is required if you are a life time member or pay them separately (but we still need the information to associate you with our club)!

Cal 4 Wheel dues are optional and due no later than the June meeting!

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ email: _____

Cal 4 Wheel Membership Number: _____ (if a member in the previous year, life time member, or paying your Cal 4 Wheel dues separately include this number. Life time members or paying separately do not pay SLO 4 Wheelers)

Send completed coupon along with a check for \$45 made payable to "SLO 4 Wheelers" to:

SLO 4 Wheelers
 PO Box 2271
 Atascadero, CA 93423-2271

SLO 4 WHEELERS

PO Box 2271
Atascadero, CA 93423-2271



We're on the web:

<http://www.slo4wheelers.org/>

Upcoming Events / Runs

In addition to this list, keep your eye on the club email list and web site:

<http://www.slo4wheelers.org/>

for last minute events or spur of the moment runs.

April 4th — SLO 4-Wheelers General Club Meeting: A-Town Deli, Atascadero Wednesday 7pm

April 7th or 8th — After meeting Run: To Be Determined at the meeting

April 14th — Adopted Trail Maintenance: Garcia Ridge Trail

Meet at the Pozo ranger station sat April 14th 9.00am. Plan to leave for trail head at 9.15. Coming from the south county area and coming up high Mountain Rd. you can meet at the trail head at 9.30 am and the group will meet **you there. Vehicle: recommend at 31's** and at least a limited slip. This trail is well overgrown and may cause paint damage. Wear long sleeve shirt and long pants, gloves a hat sunblock etc. Bring water, drinks a lunch and snacks.

We will be cutting back brush would recommend chain saws, hedge trimmers, loppers and whatever else to trim and cut brush. Note: if high mountain rd. is closed the trail maintenance will be held at Pine Mountain trail. Same requirement without Contact/trailboss: Dave F. thru the club email list

May TBD — SLO 4-Wheelers Spring Fling BBQ and trail runs.

Tentative-Annual BBQ generally held late April early May Contact/trailboss: OPEN

May 2nd — SLO 4-Wheelers General Club Meeting: A-Town Deli, Atascadero Wednesday 7pm

May 5th-or 6th - After meeting Run: To Be Determined at the meeting

May 11-13th — Molina Ghost Run:

Annual CA4WDC event to be held at Hollister Hills SVRA Upper Ranch near Hollister, CA. Runs include a Saturday run with one locker required that

includes harder trails and obstacles, a Saturday run with no lockers required and easier trails, and a Saturday SUV run. Registration is \$45 per vehicle for CA4WDC members, or \$55 per vehicle for non-members and includes one run on Saturday, one dinner, a dash plaque, and one raffle ticket. more info CAW4DC Molina 2012 Contact /trailboss: OPEN

If you have any questions or events, local runs, not so local runs you would like to do, coordinate and/or participate in, please contact the SLO-4-Wheelers Events Director.