

THE SIDECARIST



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ASSOCIATION, INC.*

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AUGUST
1996*

The Sidecarist

Contents

Jul. 1 - Aug. 31, 1996

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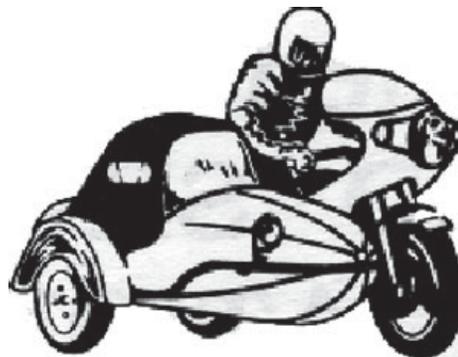
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COVER

Jack Zollars with his rig, near Catavina, Baja California, Mexico, on his trip to the Brass Monkey Sidecar Rally. Photo: Jack Zollars. See the article on page 20.



Lean-out

The phone went off the evening of May 7th, and it was USCA Midwest Regional

Director Greg TenBrook, informing me that USCA member and author, J.R. Ewing, had died the evening of May 6th, ending his battle with cancer.

That news hit me extra hard, because I had spent much of the day that J.R. passed on, typesetting his technical article that you will find in this issue of the SIDECARIST.

J.R. -- John -- for what little I personally knew of him, was a unique individual. The first clue came in reading his material. John didn't communicate like most of us do, but communicate he did, if you could follow his rambling line of thought and expression, which neared biblical proportions at times.

What it all boiled down to was John had the curiosity to be an experimenter, the knowledge to realize what was going on, the concern to pass this knowledge onto other sidecarists, and the talent to put it down in words and illustrations.

In his own words from his final letter to me: "If the guys will digest this one, they will have crossed a threshold, become better qualified and more confident sidecarists."

So, keep all this in mind when you turn to the article entitled, "Low Speed Wobble Demystified", be glad that an anonymous sidecarist asked a question and that J.R. shared his answer with all of us, for one final time.

It would seem that the phone companies keep running out of phone numbers in various population centers, and USCA has been effected with an impending change of area code for Al Roach, our USCA Secretary and Membership Registrar. Al advises us that effective August 3, 1996, his 708 area code will change to 630. That just so happens to occur in the "middle" of this particular issue's cover dates, so rather than change the phone area code in the USCA Board listings on page -4- of this issue, as well as the area code on page -2-, in the lower portion of the Membership Application and Renewal form, it remains unchanged in this issue, hopefully relying on the past trend of the various phone companies to alert callers to the area code change, when dialing the old area code.

I might add that for those of us who have made copies of the membership Application for handing out to other sidecarists, that said area code will be outdated on these, too. Plus (yes, this gets more complex) the Emergency & Friendship Directory, just published in the last (May-June, 1996) issue, will have the wrong area codes. You just might want to pencil in these changes on your E&F Directory, before you stuff it in your sidecar and hit the road this summer.

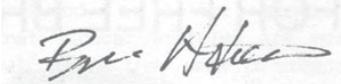
Elsewhere in this issue, Jack Zollars reports on the Brass Monkey Rally, and his trip to Baja and back, with Billie Stone pitching in to help out with photo coverage. Sounds like a lot of folks had an interesting time of it back on the President's day weekend.

Robert Bolton has been at it again, with another of his modification projects, and while many of us own other kinds of sidecars, it is always interesting to observe how others go about modifications. Somehow, we tend to file this kind of information away, just in the event that we might have similar needs somewhere down the sidecar road.

David Hough worked overtime for this issue. Not only does David have his Instructor Corner update of that realm of sidecaring, but he has wandered off into the area of sidecar videotapes, for those that may have an interest in that field. Dave is no stranger here... having had years of experience with instructional videotape production for the aircraft industry.

If this 'wasn't enough, our Washington spy invaded a Seattle area sidecar operation, snuck out his camera and took a photo of a new creation, feeling pretty smug about this accomplishment until the film was developed and he realized his camera battery was getting low enough that the focus didn't work. He felt bad enough that I didn't want to detract from his self-pity by telling him the story about the time I blew three rolls of slide film on a test bike, getting some GREAT moving shots in New Mexico, only to get home, have the film developed and find it blank due to a totally dead camera battery.

What? Oh yes, David's photo is being run, focus or not. It's somewhere in this issue.



Everything Else

KICKSTART

It had to happen; a motorcycle magazine for computer whiz-types (which this editor will never set eyes on).

"To check out KICKSTART... set your Web browser to: <http://www.kickstart.com>."

Update: No longer active [12/6/2005] HAK

NEW LIBERTY SIDECAR

Our Washington spy just happened by Liberty Sidecars, and spotted Pete Larsen's newest project, a new, smaller sidecar specifically designed for Harley-Davidson Sportsters. As press time approached, no further information was available.

For more information, contact Liberty Sidecars at 3400 13th Ave. S.W., Seattle, WA 98134 or phone (206)2928420.

HALL OF FAME INDUCTEES

When the MUSEUM REPORTER, Vol. 3 No. 1 hit the POB, they announced this year's inductees into the Sturgis, National Motorcycle Museum and Hall of Fame. They are, Linda "Jo" Giovannoni for promotion, Wayne T. Curtin for leadership, and competition which includes Allen "Al" Burke and Gary Nixon.

Those interested in attending the induction breakfast should take note of some changes this year, as this will be the first time that the breakfast ceremony is held away from Sturgis.

The induction will take place on August 7, 1996, at 9:00a.m. in Spearfish, SD, at the Spearfish Ramada Inn, off of 1-90 Exit 14. Admission is \$15 per person, with a limit of 300. A breakfast buffet is included.

For ticket reservations, contact the Museum and Hall of Fame at P.O. Box 602, Sturgis, SD 57785, or (605)3474875.

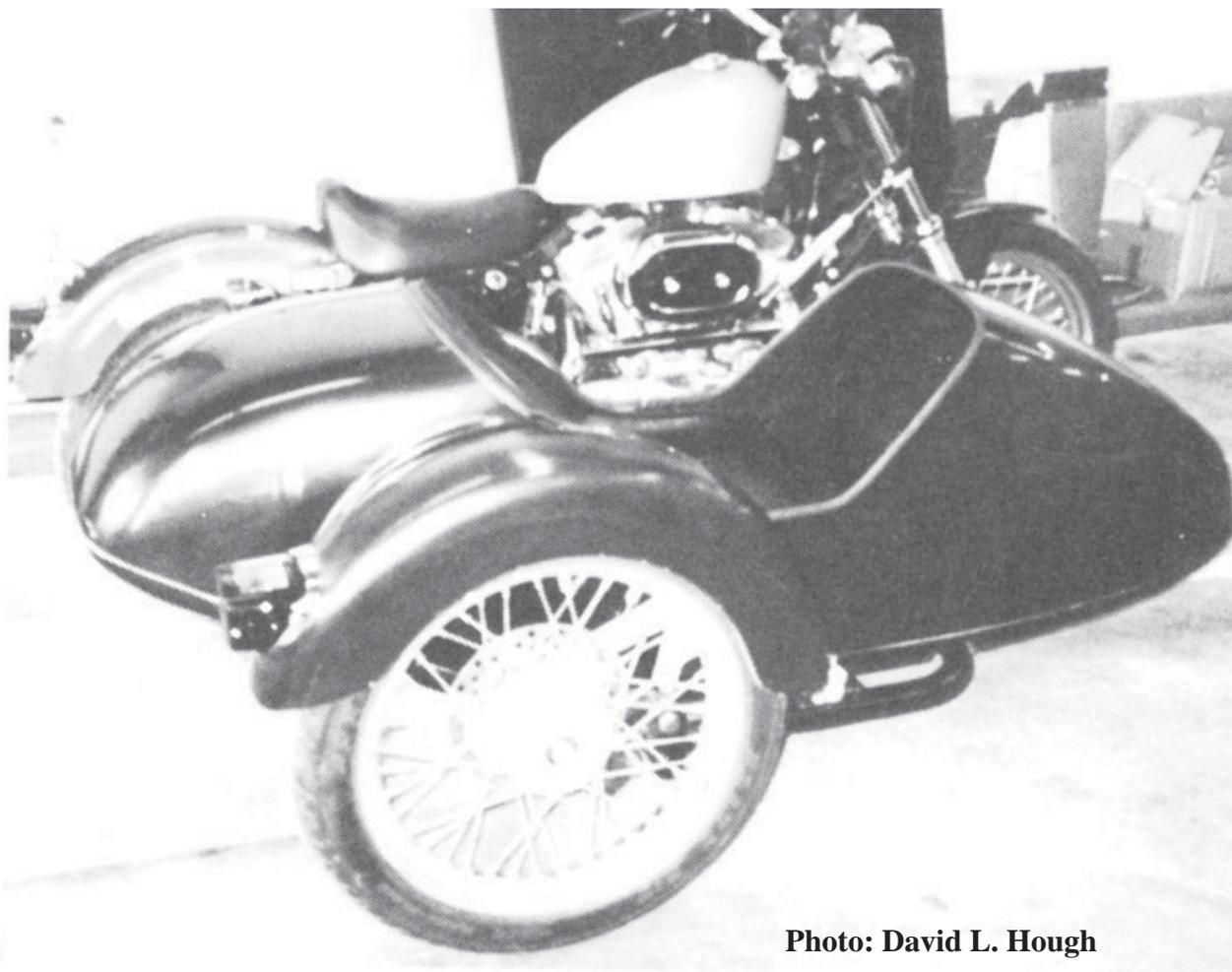


Photo: David L. Hough

Industrial News

CORDA SPORTMODEL

The June, 1996, issue of MOTORCYCLE CONSUMER NEWS, had information on two new sidecar developments, the first of which is the Corda Sportmodel.

From Germany, the Corda Sportmodel features three-wheel drive and two-wheel steering, which should tell you right away that this is no motorcycle with a sidecar hung on it.

The Sportmodel, under its bodywork of fiberglass reinforced plastic, is powered by an Audi five-cylinder turbo-diesel, with a four-speed automatic transmission with reverse. A one-piece steel chassis incorporates a roll bar with the sidecar featuring a detachable "Targa" top.

At nearly \$43,000, the option list includes air-conditioning and heating for the sidecar portion, sound system, etc. If that's too much, for about \$33,000 Corda can fix you up with a frontwheel-drive only "Grundmodell" with a smaller 1896cc Audi turbo-diesel engine.

For more information, contact CPM Motors GMBH, Ausbau 3, D-19300 Wanzlitz, Germany, or phone ++49(0)38756 5050.



Swedish Corda

ARMEC TREMOLA II

Armec, builder of the Tremola sidecar, has added two more BMW fittings to their lineup, for the R1100RT and R1100GS models.

The special motorcycle frame features a six-point attachment to their sidecar, in addition to special steering and wheels.

The GS version has an increased ground clearance of 70mm (2.75-in.).

Cost? The Tremola with GS goes for about \$35,650 at current exchange rates, while the R1100RT with Tremola is about \$39,675... but of course, these figures don't include painting.

For more information, contact the World's Motorcycles News Agency at: WMCNA, 51 Greenacres, Ludlow, Shropshire, England SY8 1LY.



Industrial News..

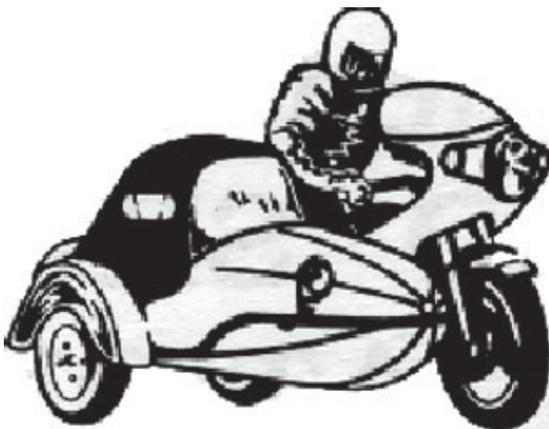
PEGASUS VIGILANTE

The Spring '96 issue of HACK'D features a lengthy article on the Vigilante, another specialty sidecar sold as a complete unit. Pegasus Sidecar Manufacturing Ltd., is based in Vancouver, BC, Canada, but production plans involve a proposed southern California facility, with parts for the Vigilante being sourced from the outside.

The currently quoted performance figures are based on computer analysis of an as yet unidentified 1100cc "high output 4 cylinder engine".

In referencing back to Summer '94 HACK'D, in another article on the Vigilante, it was noted that "Negotiations with engine manufacturers are still underway...". A 1994 quote on the suggested retail for the outfit was \$20,500, but the latest estimates now have that figure up to \$27,000.

For more information contact Pegasus Sidecar Manufacturing Ltd., P.O. Box 2152, MPO, Vancouver, BC, Canada V6B 3V3. Or telephone (604)9700776.



DUETTO REVIEW

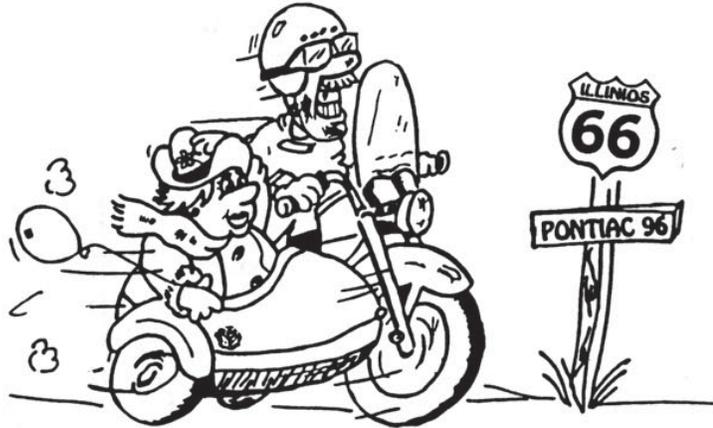
The May, 1996, issue of MOTORCYCLE TOUR & TRAVEL, featured an article by our own David L. Hough, who had the chance to try out the Duetto, while it was making the rounds of BMW dealerships in Seattle, Washington..

So what is the Duetto? It's a specialty built \$60,000 sidecar rig, out of the Swiss firm of Gruter & Gut (GG Motorrad Technik), hence the name, GG Duetto. Power is by a BMW K1100 engine and just about everything else is unique including center-hub steering, low profile tires and sidecar amenities including hinged trunk and passenger door with BMW electric adjustable windshield. With any luck, MCT&T might grant reprint privileges to the SIDECARIST.



Rally

18th USCA RALLY



AUGUST 1, 2, 3, & 4, 1996
Pontiac, Illinois

MOTORCYCLE SHOPS IN AREA

CHUCKS HARLEY-DAVIDSON
 2027 Ireland Grove Rd.
 Bloomington, IL
 309-662-1648

SUZUKI/KAWASAKI
 2434 S. Main
 Bloomington, IL
 309-829-6383

GARRELS HONDA
 Rt. 116 East
 Pontiac, IL
 815-842-3175

MOTELS WITHIN 2 MILES OF RALLY SITE:

Comfort Inn	(815) 842-2777
Super 8 Motel	(815) 844-6888
Downtown Motel	(815) 844-5102
Pontiac Chamber of Commerce	(815) 844-6692

USCA RALLY REGISTRATION

Operator _____ Age _____
 Passenger _____ Age _____
 Passenger _____ Age _____
 Passenger _____ Age _____
 Address _____
 City _____ State/Province _____ Zip/Mail Code _____

RV's And Campers Welcome, But No Hook-up's Available

ANYONE INTERESTED IN SIDECARS IS WELCOME - BRING A FRIEND!

Rally..

THE SIDECAR RALLY INCLUDES

- Field Events
- Sidecar Clinic
- 50/50 Drawing
- Campfire
- Rally Pins to First 500
- Camping All Three Nights
- Awards
- Kids Games
- Door Prizes
- Vendors
- Free Coffee
- Optional, Sidecar Safety Program
- Church Service

REGISTRATION INFORMATION

Advance registrations must be in U.S. funds and must be postmarked by July 15, 1996
Registration fees are as follows:

Advance Registration:

Age 16 & over \$25.00
Age 15 & under Free

Registration at Rally:

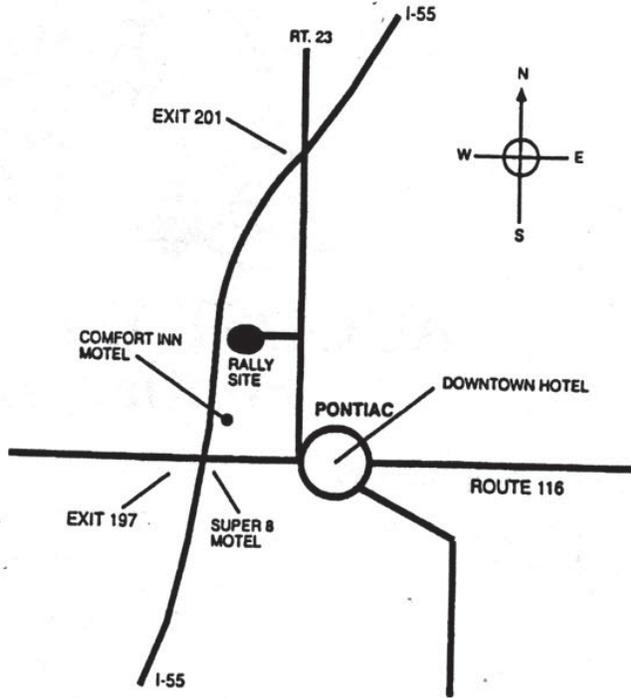
Age 16 & over \$30.00
Age 15 & under Free

To register in advance, send check or money order in U.S. funds payable to USCA. 1996

Marilyn Johnson
703 First
Manhattan, Illinois 60442

LIVINGSTON COUNTY 4H PARK PONTIAC, ILLINOIS

Located north of Pontiac, IL just off Route 23.
Take Interstate 55 to Exit 201. Ride south on
Route 23 one mile to a side road.
Follow the signs to the rally.



ALL MOTORCYCLISTS WELCOME

Number age 16 and over: _____

Number age 15 and under _____

Check or money order for \$ _____
in U.S. currency enclosed.

Signed _____
(Operator/Rider)

Signed _____
(Passenger)

FOR USCA USE ONLY

Registration No.: _____

Dated Received: _____

Amount Paid: _____

Signatures On This Form Relieves The United Sidecar Association, Inc. And Its Officers And Volunteers From Any Liability For Property Damage, Bodily Injury, Theft, Motor Vehicle Accident Or Any Other Injury To Persons Attending The 1996 USCA Sidecar Rally.

'tec Talk

IN SEARCH OF EXCELLENCE: LOW SPEED WOBBLE DEMYSTIFIED

By J.R. Ewing: 1923 - 1996

The letter was from a fellow in Kentucky. It went something like this:

"Got your name from the sidecar people (USCA). Do you have a good used steering damper I can buy for my sidecar?"

"I can't get any professional help here for my rig. No one here works on them. I have the books from USCA. Any help you can give me would be appreciated.

"Motorcycle is 1982 Honda CB750K. Brand and year of sidecar is unknown. Nothing on it or under it and I have looked.

"I am a novice in sidecars as you can tell.

"Motorcycle has low speed wobble (disappears at higher speeds) with sidecar attached. No wobble to front fork without sidecar. I guess I need a sidecar steering damper."

The letter writer posed exactly the CLASSIC question for sidecarists, and I'd like you to know that EVERYBODY who ever rode a sidecar has wrestled with this. Some of us have laid awake and thought about it; some of us have gotten out into the garage and invested some wrench time. Some of us have fought and re-fought the wobble battle time and again. So feel comfortable; you are in select company. The best and brightest among us have walked this path before you. How do we deal with a low speed wobble?

This motorcycle/sidecar combination looks deceptively simple, and will fool you, for every step of technical progress will take you further into deep waters. The motorcycle/sidecar is a mixed herd of systems, and some of them do not even like one another. So, to help you cover the ground quickly, learn from one letter the lessons of years, I am going to break this down systematically and suggest that you follow this up step-at-a-time much as I have recommended it to

you. First step: Where does the wobble come from?

The wobble comes from the sidecar's wheel. You have already figured out that the bike did not wobble solo, before you installed the sidecar. To drive that lesson home, to make it absolutely clear to you, I'd like you to perform an experiment with me. Take the machine out and LOW SPEED ride through an ordinary uneven slightly potholed street taking care to weave the progress so that the sidecar wheel follows between. I would like you to notice that as long as the sidecar wheel is routed over smooth sailing, there is no significant wobble. Did the bike wheels step through moderate adversity you will read this as the quality of the ride, but bumping the bike does not necessarily trigger a handlebar wobble. However, same road, run the sidecar's slavewheel through the bumps and potholes, and you will read quite significant jerk and wobble in the handlebars. This is because the sidecar's wheel is a SLAVE-wheel controlled completely by outside forces. That wheel has no will of its own. It responds.

The slavewheel's response is jerky, uneven progress, hesitant, spasmodic, and this does not get better until you pick up the speed. As you increase the speed, the bike, the sidecar, and the slavewheel, pick up momentum which influences everything to progress more smoothly. As we pass through about 50 miles per hour, this momentum influence has increased to the point where it overpowers the bump/pothole influences, and the slavewheel shrugs off all but the worst of the bump/pothole bad news. At higher speed, we can handle a big bump, one which may even pitch our slavewheel up airborne; we may set the wheel down again without a sign of wobble. Momentum has taken over and has strengthened our hand. Smooth sailing.

The traditional fix for low speed handlebar wobble is to correct what the bike is doing,

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LOW SPEED WOBBLE DEMYSTIFIED..

concentrate upon the motorcycle and improve its control systems so that it can better cope with the disturbances coming from the sidecar's wheel. This is a sound approach, for there is very little that we can do to improve what is going on at the slavewheel. Since we cannot eliminate the problem, let us improve our ability to handle it. That is the cure that you are looking for; you are on course with every sidecarist since time began, and let's go to work on it.

Now I'd like you to elevate the front of the motorcycle off the ground. Floor jack, blocks of wood, whatever, I just want the front end up so that the front wheel clears. Then I want you to sit down in front of the bike, wheel between your knees, and with your fingertips gently sway that front wheel from one side to the other. I'm looking for an uneven response, a "ripple" of movement. I expect that front wheel/fork to jerk and surge as it is cycled from one side to the other. If this is the true case, it is due to brinelled bearings (which is an engineer's way of saying "dented"). Your machine early models had ball bearing steering head assemblies, which are especially vulnerable to this dent damage. Later models had Timken tapered steering head rollers, much, much stronger -- and even those are subject to damage. Kits are available to upgrade your early ball bearings to the stronger tapered rollers. What I am after is that you have new or perfect like new TAPERED roller bearings in the frame steering head, smooth, effortless movement when you test them as I have described. Dented bearings do not CAUSE a wobble, but they will jump onto and enhance any wobble tendency that is there. Bearing replacement is almost a professional job, for a special tool is required to properly tension these new bearings. Your mechanic thinks of this as "pre-load", and I want his attention. I wish him to raise the factory preload from a low value to 2022 foot pounds torque load on the adjusting nut. This is necessary because with a sidecar, the bearing is carrying more load, and that bearing must be pre-

stressed BEYOND any bump load that it will encounter in service. Bearing dent-damage from not being tight enough; they "bump" across their load-races, and suffer damage from impact. Mechanic:

Elevate the assembly torque. To not go hog wild with higher numbers; these backfire also.

Perfect bearings. 20-22 foot pounds pre-load. Top (crown) nut torqued per factory specs. Never pound about those handlebar-crown areas with a hammer. NEVER.

Front tire: Take it off and throw it away. Some are worse than others. Worst of all are high performance tires with vee-block treads designed to corner faster; those are very bad for a sidecar. The tire of choice for your machine is an Avon Sidecar Triple Duty MKII which your dealer may have to hunt for. Check with Modern Tire, Evansville, IN. Failing this, contact Dennis Kirk, Rush City, MN. This is an old fashioned superior handling sidecar tire which just happens to fit your bike. Many of us with later bikes wish that we could obtain the same tread for our newer machines. Inflate that front tire to 42 psi. If the world has run out of this Avon sidecar tire, next choice is a Continental Conti Blitz THK23. Yes, there are other good tires on the market, but these two are best for the front wheel of your bike. C-a-r-e-f-u-l-l-y balanced, 42 psi.

Suspension is important to a sidecarist. I fit Progressive Suspension Inc., front fork springs to every sidecar machine I touch. Preload these springs to 80% ride height for sidecar use; they can tell you how. Weak, soft rear suspension units are great sources of wobble trouble. The best of all cures are KONI 7610 series shock absorbers, chart selected for your model Honda 750, with upgraded 135 pound springs. You may need to contact your racing distributor for the combination needed, special ordered. KONI is headquartered in Florence, KY, 1-606-727-5028, and will tell you who your distributor is. The KONIs are rebound adjustable; it will pay for

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LOW SPEED WOBBLE DEMYSTIFIED..

you to experiment with those rebound adjustments to become familiar. You will find the best high speed ride control in the higher numbers, #3 or #4.

Of course, condition of the swingarm bearings or bushes. Solo bike use, the wheels tend to play follow the leader. Not so for sidecar use; each wheel has a role to play and is determined to do so which means conflict with the other. Wobble.

Long screwdriver bit, soda straw, piece of wire; feed something into the ends of your handlebars. If it goes in over about a half inch, remove those handlebars and take them down to an old fashioned plumbing shop. Tell the man you wish a pipe plug driven into each end as far as the first bend, then turn up the bars and fill them with melted lead. (A plumber has used melted lead around soil pipes for generations.) You want the ends of your handlebars filled with lead to gain weight, for at this point, weight will stabilize, dampen the movement of the bars. Which will of course, discourage wobble, and will incidentally dampen engine vibration.

Of course, condition: Wheel bearings, strut end connections, the condition and BALANCE of the sidecar wheel/tire.

Now last; extremely important, controversial. This will get you arguments. Park the bike, locked in low gear, and you squat down next to the sidecar's slavewheel. Grip that wheel front and rear, roll it rock it back and forth, VIOLENTLY. (The forces originating from the road and acting upon this wheel are much greater than you or I can arm wrestle.) Did you really put your mind to it, you can rock the slavewheel, send the message to the bike's fork and front wheel, and flop both from side-to-side and lock-to-lock, exactly the same handlebar wobble as you encounter while accelerating from a stop sign. This comes with the territory; we cannot completely avoid this. But we CAN AVOID

MAKING IT WORSE! Toe-in is the agent for increasing the wobble.

If you discuss this with your brother-in-law or with a self-styled expert you will be honked at. Toe-in is thoroughly and widely misunderstood, and the veteran who has ridden for years is the main culprit for his ideas are rooted in the past. I want to impress you, drive home the point, that our motorcycles are constantly changing. Your machine functions much differently than did my first iron horse back in 1938-40. My newest Suzuki functions some differently than your machinery, mostly because the engineers have been fooling with the steering geometry. So I do not want you turning to your brother-in-law for comfort and advice. He doesn't KNOW anything. Mostly your machine has gained a whole bunch of traction benefits over a 1938 model, and this shows up in how we align the motorcycle/sidecar combination.

Do you know how to install a straightedge alongside your motorcycle wheels? A piece of iron pipe -- a length of electrical conduit is even better -- has been held up to, compared to a taut string. A plain old white cord string under tension is a very accurate straight line, and if you can hold a pipe alongside, eyeball the both and see no waves or air gaps between, you have a winner. You may rotate the pipe, find one side perfectly straight, a quarter turn away not so satisfactory. Anyway, the straight string is the master gauge which tells you that your new pipe-tool is accurately perfect. You may need to try, test, and discard a few before finding one that matches the straight string perfectly. Locate another; we need two.

The pipe that goes by the bike wheels, strapped lightly in place with Bonji straps, must be shimmed at the front wheel. The front tire is on most bikes narrower than the rear. MEASURE THIS; never depend upon the numbers on the tire's sidewall. I want to know absolutely accurately the width of the bike front and rear

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tires, and the DIFFERENCE between them. You will mentally divide that difference in half, and shim one half of that difference alongside the front wheel between tire and your new pipe gauge. This means that the pipe gauge is now perfectly parallel to the centerline of the tires (although offset from it some little distance). the gauge should strap in place ACCURATELY the same place every time; it becomes a base-line, a reference. We will strap the second pipe gauge alongside the sidecar wheel. I jack a new sidecar wheel/tire, a stranger, off the ground and lightly hold a chalk nearby so that it contacts the tire sidewall ONLY at the widest spots. This drill guides you so that you locate the wheel so as to pass the pipe gauge alongside at two evenly marked spots, front and rear. I mark halfway between; a piece of wire around a spoke, a minute punch mark on the wheelrim on a line perfectly below the wheel's axle. Next time we do this, I turn that mark to the ground. I WANT YOU TO MEASURE WITH YOUR GAUGES ALONGSIDE THE EXACT SAME SPOTS ON BIKE AND SIDECAR TIRES EV-E-R-Y TIME! This is super important for if you are careless, you will not get the same reading two times in a row. Pipe edge to pipe edge, measured just behind the sidecar wheel and again perpendicular to the bike's front axle, I want the pipes at the front (bike axle) to measure about 1/8-inch closer together than at the rear. That measurement is "toe-in".

No machine with street tires destined for use on pavement should measure over 1/4-inch. This is modern geometry; it does not fit your grandfather's resurrected 1923 Thor. 1/4-inch toe-in may be suitable for a very wide, heavy, or a poorly rigged machine. ("Poorly rigged", for as the outfit proceeds down the road a loosely assembled motorcycle/sidecar will "spread" and will loose toe-in, retreating toward 1/8-inch toe-in which is where I'd prefer you to start.) This is a good number for a careful sidecar installer doing the best he can, rigging and struts with some slight imperfections which only vast

experience will come to him. A very, very good installer working with the best of equipment, with Heim spherical joints instead of clevises and throughbolts, with bike and sidecar in taut, tight perfect condition can get away with as little as 1/16-inch toe-in, because he is working PRECISION, which is my Holy Grail. No outfit should have slack in the fittings, did you shake the bike and sidecar, testing, upon completion? No machine should wish for 3/4-inch, 1-1/4-inch or 2-inch toe-in. If a manufacturer tells you this, he is covering up faults in the equipment. If an old time sidecarist tells you this, he is living in the past. No machine needs more than 1/4-inch toe-in. If you reach that number, go back and figure out what is wrong with your installation.

Why am I making such a point of toe-in? Toe-in causes wobbles just such as you describe. Obviously, if you turned your sidecar wheel completely sideways 90 degrees to the motorcycle, completely crosswise to the road, it would be unrideable. If you turn your sidecar wheel five degrees sideways (toe-in) that is five ninetieths of that impossible situation. We are our own worst enemies.

Just a very few degrees toe-in will "tighten up" the outfit slightly, feel good. The proper very few degrees are those that will allow the sidecar wheel to point straight down the road with the bike in motion, slipping very slightly sideways at the rear wheel. The slight drift pulls the slavewheel toward the centerline of the outfit, on line straight forward, and is beneficial in only that tiny amount. If you lived in Louisville and never got out of town, did all of your riding in the city, I would install your car with zero toe-in. That would best fit your riding situation.

I cannot overstate this: Toe-in makes low speed wobble worse. Use as little as your outfit will allow. It is the motorcycle/sidecar that I want to get comfortable with one another. You, what you like, we will address in another letter.

Never, never, NEVER bias the mechanicals

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to suit the "feel" in your buttocks. If the bike leans left too much, you have not invested in stronger aftermarket springs/shocks. It's that simple.

I realize this is a lot on your plate. Most sidecarists are off by themselves, MUST make themselves into experts because there's no one else around, and this means doing some learning and some work. You are perfectly capable of this; just tackle it a step at a time.

You have probably noticed that I did not answer your question about a steering damper. Steering dampers are not wonderful; they contribute only slightly stiffened steering which helps to overpower a bad mannered motorcycle, and I have used them often. It is a matter of trade-offs; we put up with a little steering resistance from the damper because what it helps us control is worse. My newest NEEDED a steering damper at first set-up for it was high speed unstable. I arrived at the third different front tire, before subduing this devil, completely re-engineered my rear suspension. The bike no longer NEEDS the stability assistant; I have corrected the causes which is the ideal way to go. Sometimes, this is not possible or you cannot figure it out, and a damper is a dandy way to live with the situation. Your particular machine, the Honda 750, should not NEED a steering damper if you do everything else right. I have ridden those machines lots of miles, and they make dandy sidecar motorcycles. I'd ride yours without a damper; easier and softer steering Good luck. Write to me; tell me how you've made out.

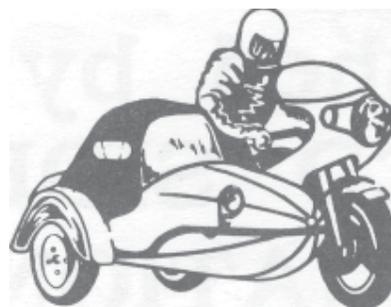
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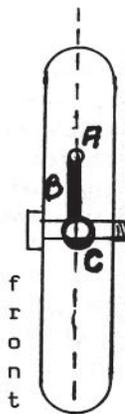
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'tec Talk..

LOW SPEED WOBBLE DEMYSTIFIED..



1/16", 1/8" or 1/4" narrower at front axle than at point just behind the sidecar's slavewheel.

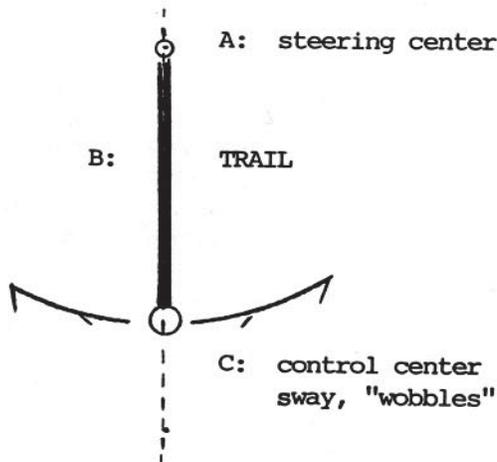
Steering Center is forward, is a line through steering head bearings, is parallel to and slightly behind fork tubes. Tire Contact Patch is the true Guidance Platform, "Control Center," follows the Steering Center by 3" to 6" Trail.

← Contact Patch - Control Center is exactly below the front axle - perpendicular.

A: Steering Center B: Trail C: Control Center

The Control Center FOLLOWS at the rear end of the Trail (invisible lever). You must SWING the Control Center with your arms-shoulder strength. You must also resist disturbing influences from rear and one side, coming forward from the slavewheel.

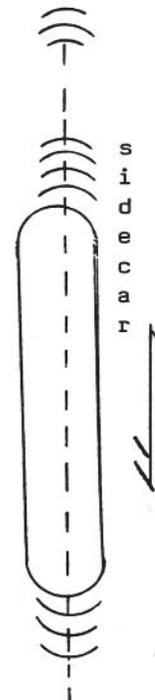
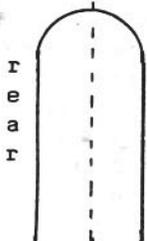
TOE-IN pulls harder, increases the "drag" resistance at the slavewheel, MAGNIFIES The Messages sent to the front wheel. LOW Toe-In Numbers lessen disturbances sent to the Control Center, shrink the "wobbles".



Bumps, potholes cause uneven forward progress of slavewheel. Uneven forward motion sends "messages" to the front wheel, will wrestle, "wiggle" the TRAIL (which is a very powerful lever). You must OVERCOME this lever in order to steer the motorcycle. You must RESIST this lever in order to control the wobbles.

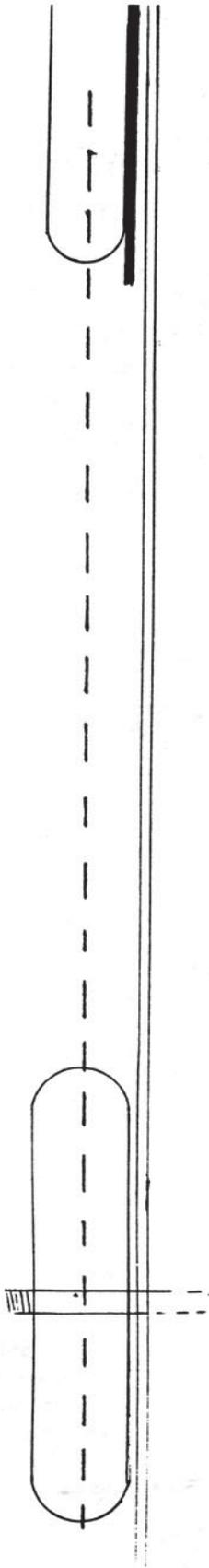
TRAIL is a blessing, we must have a generous amount. TRAIL is also a sidecarist's curse, for it over-stabilizes when we wish to steer into a turn.

TRADE-OFFS!



'tec Talk..

LOW SPEED WOBBLE DEMYSTIFIED..



CENTERLINE of bike tires - - - - -

SHIM - 1/2 of DIFFERENCE between tire widths 

CHECKED True - straight pipe or conduit 

Read at the front axle, these pipes should narrow down:
1/4" for extra wide, heavy, or loosely rigged sidecar.
1/8" for a "tight" car assembled by a careful workman.
As low as 1/16" for top drawer equipment: Heim joints on the strut ends, five struts (one angled at 45 degrees), NO LOOSENESS or Slack in the fittings, a sharp very careful workman.

Low toe-in pulls more easily.
increases gas mileage.
reduces tire wear.
reduces low speed "head shake".
is less skid-prone, slippery footing.
reduces the wear on the motorcycle's rear tire, DRAMATICALLY.
is easier on your arms and shoulders.

Lean the bike OUT until it steers "no hands" at your favorite cruise speed. Re-check the toe-in.

Sidecar setup is easy. You just have to stop listening to your brother-in-law.

Sidecar axle "leads" rear wheel axle:

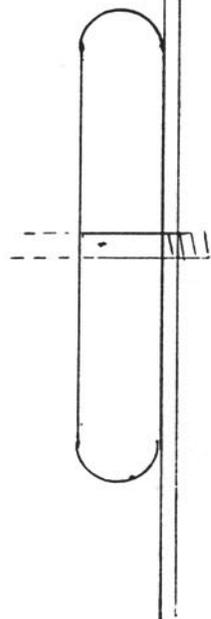
6" on chain/belt driven bikes

8" on shaft driven bikes

EVERY Inch of lead above these figures contributes to increasingly difficult steering, as the slavewheel must be forced to scuff/skid sideways thru use of handlebar pressure. YOU must overpower the traction of the slavewheel.

Such low numbers as these require smart rigging practices, Upgraded SUSPENSION. Soft "factory" springs handicap the entire installation.

Upgrade Springs and Shock Absorbers.
Motorcycle tires fitted, increase inflation
42 PSI rear, 36-42 PSI front.
DO NOT FIT larger, extra wide tires on narrow wheelrims. They wobble.



Members

CLIFF AND BETTY SMITH

By Cliff Smith

I was born with motorcycle blood in my veins! I have been riding motorcycles since I was 14 and I'm almost 73 years of age. My first cycle was a 1929 Harley -- Model JD. Then a 1934 Harley '74. Next a 1937 Indian that was almost new with only 2,000 miles on the odometer. Sure would be proud to have that one in our possession now. It was Harley's and Indian's -- then from 1951 till 1958, Betty and I rode BSA singles and twins. The BSA 500cc Gold Star was our favorite.

In 1958, we purchased a new 1958 R60 BMW and have been riding BMW's ever since. We currently have three BMW's that we keep tagged and insured and ride, and two more that need some restoring. We have never kept track of the miles on other bikes, but we have close to 600,000 miles on BMW's. We have been members of BMWMOA since its infancy and have been Ambassadors for the organization since 1973. We are very proud of that honor.

I lost five months of motorcycling in 1990, because of a very serious accident in Old Mexico. As a result of the accident I have had a problem with riding two-up, and we are now the proud owners of a sidecar. And yes, it has been named "The Turtle".

We have been members of the IBMC group since 1974. While attending an IBMC campout at Belvelle, Kansas, over Labor Day weekend in 1995, I met new friends George and Pyhllis Worley, of Atchison, Kansas. The Worley's were riding a new Honda Goldwing 1500 with a Hannigan sidecar. They were nice enough to take me for a ride and I liked it. Soon after, the Worley's, Betty and I, met at the Kimberling City KOA near Branson, Missouri, and they were trusting enough to let me ride their bike and Betty got a nice ride in the sidecar. We both liked the Hannigan and felt it would serve us well. George had an electric lean device on his rig and I knew that was the answer.



We purchased a 1995 Hannigan Sport sidecar with a sub-frame included, and installed it on our 1977 R100/7 BMW 1000cc. I also installed an electric lean device between the bike and the sidecar. We took our first ride November 15, 1995, and in spite of a cold winter, we have ridden it almost 1,900 miles and so far we love it. The leaner device gives me the feeling of still riding my solo bike.

The electric leaner device is a PPA Linear Actuator, rated at 1,500 pounds, 12 volt with a four inch stroke at 0.4 inch per second at approximately eight amps. The electric lean is made by Thompson Saginaw Ball & Screw Co. Cost on the leaner was \$200.00 including tax and freight.

The sub-frame supplied by Hannigan, strengthened the BMW frame for a four point connection for the sidecar, but a stronger point of attachment was necessary to connect the leaner unit. I manufactured an 11 x 11 x 11 x 1/4 inch steel plate and bolted it to the bike frame for the electric lean connection. I created heim type joints for all points of attachment to the bike and sidecar, of which there are four.

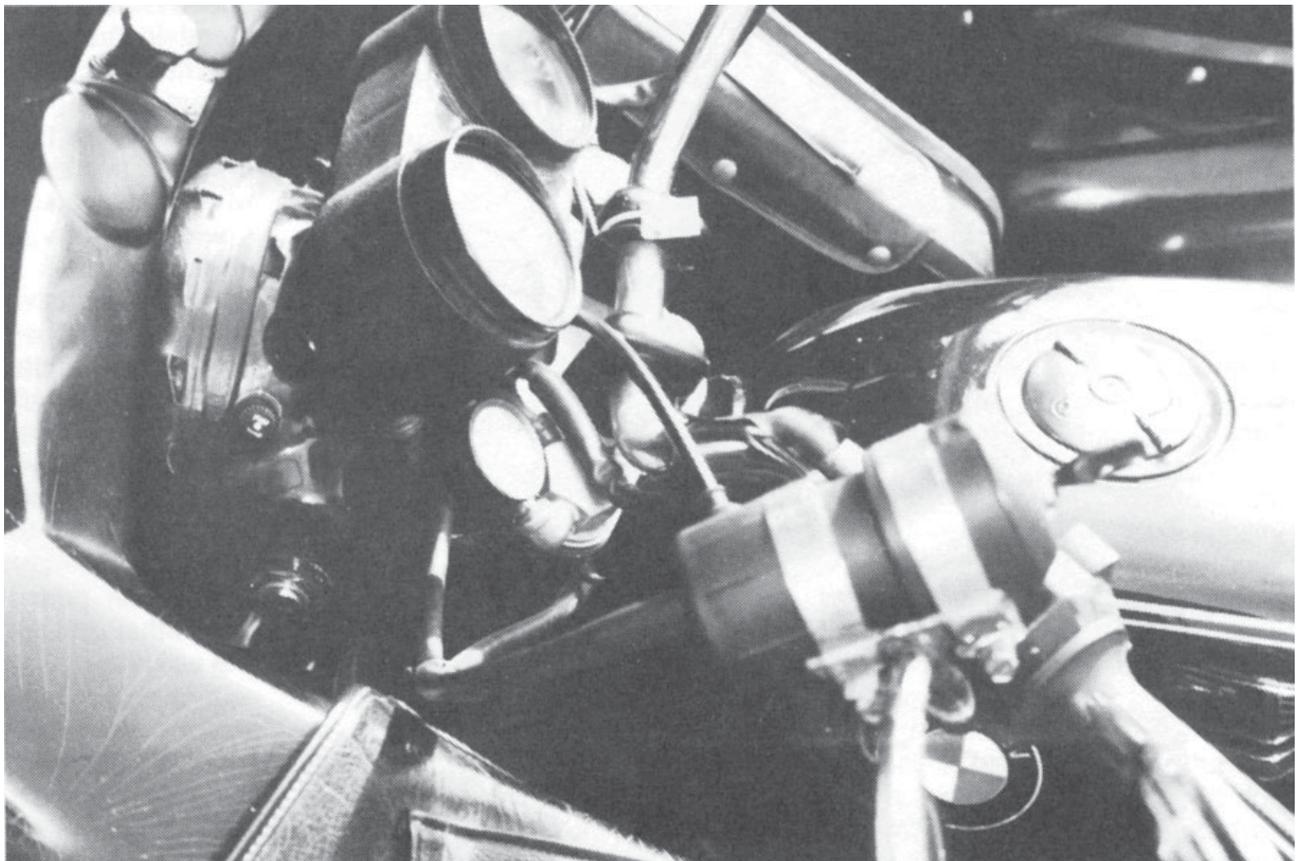
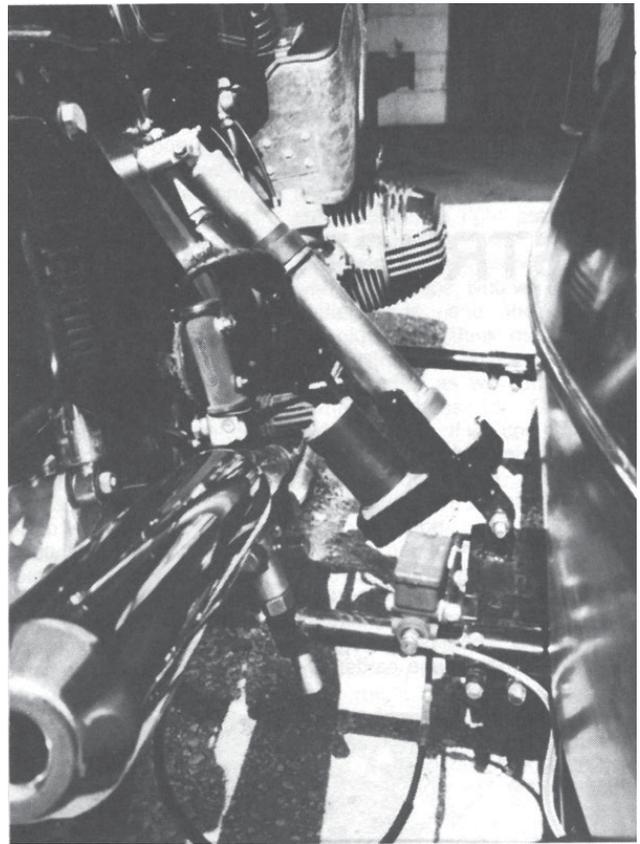
Members..

CLIFF AND BETTY SMITH..

To control the 12 volt DC motor on the leaner unit, I used a three-position 20 amp, 12 volt DC on-off-on switch, purchased at Radio Shack for approximately \$5.00. I used two 1-1/4 inch PVC pipe caps and a three inch piece of PVC 1-1/4 inch pipe for housing the switch, attached to a clamp on the left handle bar. Total cost on the electric leaner and mounting -- not counting my labor -- was approximately \$235.00.

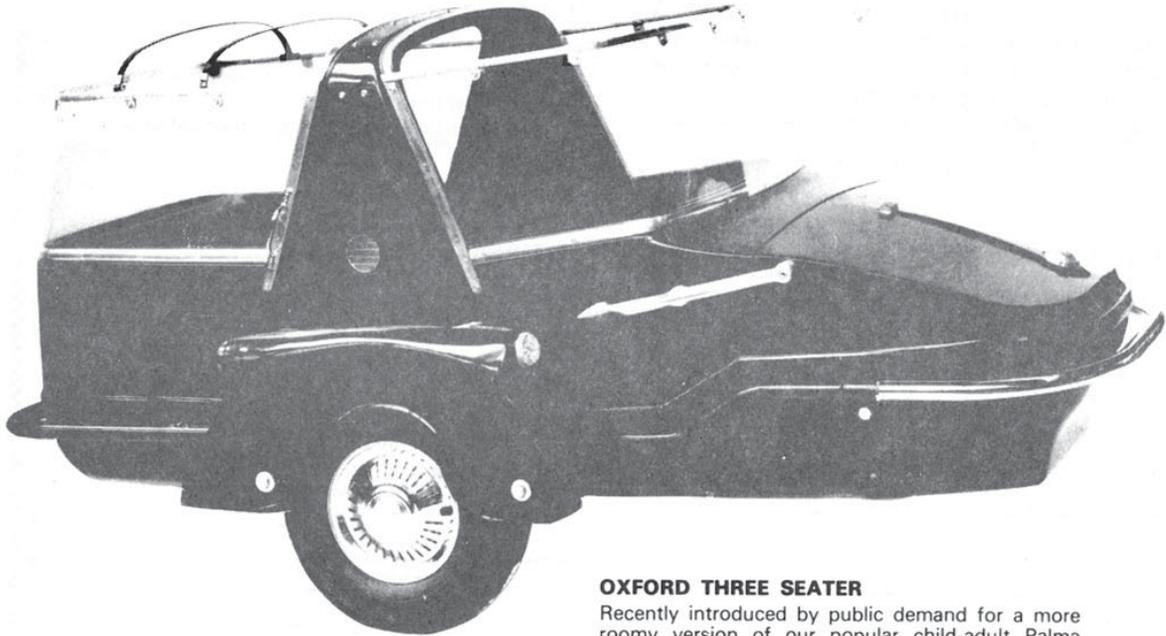
The BMW R100/7 came with a 10-32 rear gear set, or 3.2. I installed an 11-37 gear set, or 3.36, in place of the original for better performance. The average mpg in this windy area of Oklahoma, is 32 mpg.

We are looking forward to summer and attending some rallies, as USCA members #5564.



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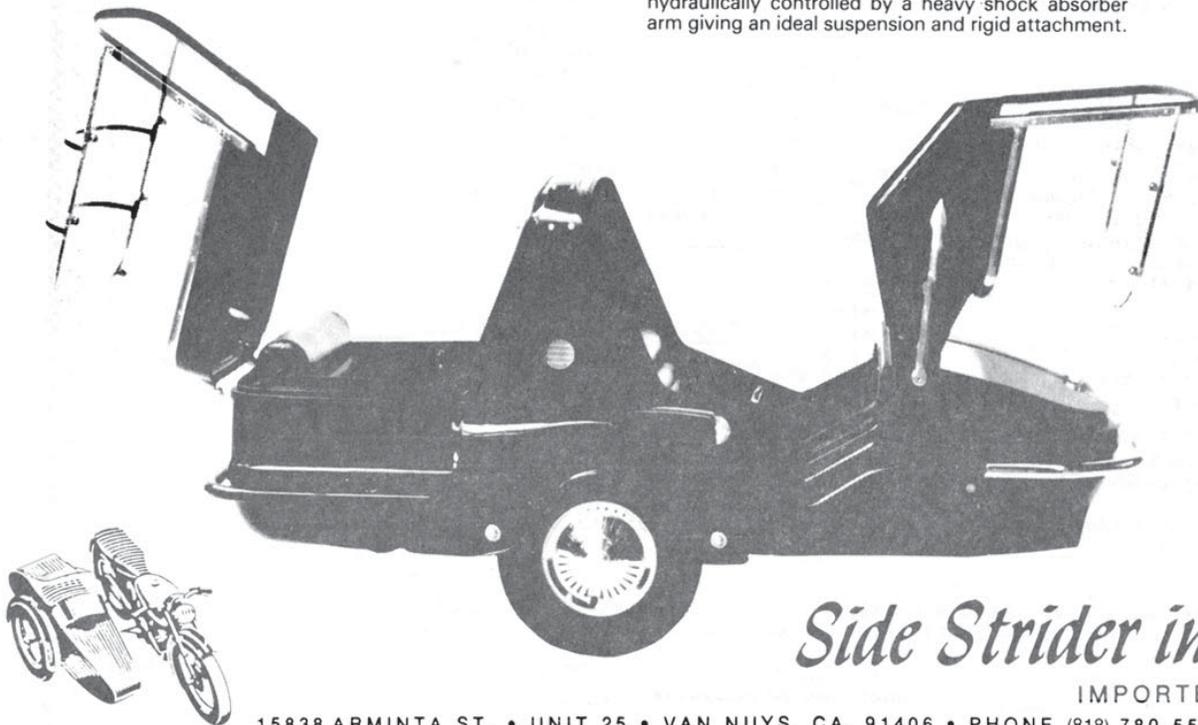


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Rally

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WHERE: Muscatatuck County Park (SW of North Vernon)
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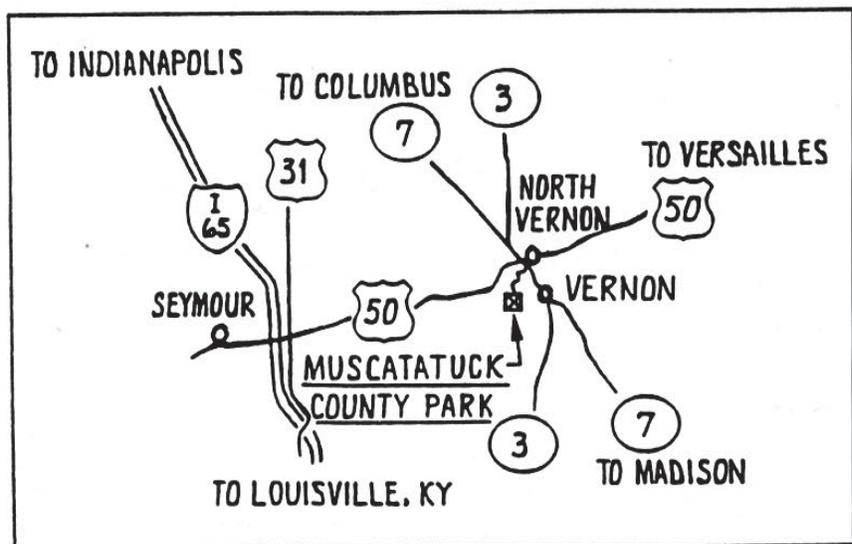
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Tech Session
*Certified Sidecar
Safety Course

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Restaurants
Food, Other Stores



* 9:00 am Saturday morning. Must signify intent before Campout.

INFO. PRE-REG: Fred Hunteman, ph. 317--831-8105
15 Daniel St., Mooresville IN 46158

Rally

BRASS MONKEY RALLY HELD AT MULEGE, BAJA, CA



Ed and Zane Tetreault, with their 1985 GL1200/Motorvation rig at Catavina, Baja California, Mexico. Note the Cirio tree in the background, between them. Photo: Jack Zollars.

By Jack Zollars

Over the last several years the Brass Monkey Rally has been held at several locations throughout the Southwest. And at the last six or more, a BMW sidecar driver has attended from Mulege, Baja California. Jake Jacobs has driven the lonely and dangerous road from his home in Mulege, to the U.S. over and over. At each rally site, year after year, he has invited us to come to Mulege and visit him. So!!! In 1996 we did. According to my notes we had 30 riders sign up in the book that Jake provided at his home. Those that signed in after I left, will have to be left out. Sorry!

The plan this year, as in the past, was to have the rally at our destination. This year it was at Jake's home in Mulege, Baja California. Dave Tenpenny and I, co-hosted this rally and it was decided in 1995, that we would try and meet in El Centro, California, on Wednesday, February 14, 1996, at the KOA campground and then make our way to Mulege.

And so we began our trips. Myself and Ed and Zane Tetreault, from Northport, Washington

(north of Spokane and six miles from the Canadian border), left Lancaster, California, on the morning of February 14th and proceeded to El Centro... and arrived at the KOA about 2:00p.m. Our first surprise was that the KOA that was in business in 1994, is now still in business but not a KOA. So our first worry was if the arrivees would find us. But true to the ability to find anything, the riders found us. I counted 19 people at the "KOA" on Wednesday night.

Thursday morning we were on the road as early as possible as we were trying to make our Thursday night destination at Catavina, Baja California. Catavina is 400 miles below the border on Mexico Hwy 1. From El Centro, it was close to 450 miles.

The road in Baja is two lanes, two narrow lanes, with rough surfaces, 18 wheelers constantly traveling both directions. To average any great speed is impossible. But, if you can take the time it could bring back memories of the 50s roads in the U.S.A. We had good sightseeing and wonderful weather for the day, but in trying to

Rally..

BRASS MONKEY RALLY, MULEGE, BAJA, CA, MEXICO..

get to Catavina, we were really only driving, driving, driving! And of course, Red never did get to stop. And when Red did stop and we caught him, we told him to keep driving! Poor Red.

We did at last arrive in Catavina. The group I was with arrived about 30 minutes after dark. How does the phrase, "Boy, did you see those cows?", sound if you are leading a group of four and the last driver who is probably a half mile behind you, tells you about some cows that you didn't see?! It was a little spooky. We saw cows, burros, horses and herds of goats on the road that day and that first night. We spent the night on the ground at Catavina and spent the next day driving to Mulege, a distance of 320 miles.

No problems and perfect weather and lots of sights to see, including the unusual Cirio tree, or boojums, a unique plant that grows only one place in the world and it is on the plateau around Catavina. It is single trunked, green and tall, with the top branching into single curved tips... some of them 10 or more feet tall.

Arriving in Mulege about 2:00p.m., we made our way to Jake's home with no trouble. Jake had told us in 1995, to ask anyone in Mulege and they would know him. Boy, it was exactly that easy. We rode through Mulege, and I remembered Jake saying he lived south of town. We stopped at a gas' station and asked a man gassing his car if he knew Jake. And he gave us the directions and we drove to Jake's home with no trouble.

I led the way up Jake's driveway and Jake's first words to me were, "I have no more room, you will have to camp at the bottom of the hill". I had been expecting maybe 15 rigs to show up in Mulege, and we doubled that number. Jake was surprised and so was I. And about that time, here came Red. We all yelled and waved but Red went right on by. Probably, he was tired of all of us telling him to keep riding.

Saturday night, Jake had a campfire prepared for us next to a restaurant and all who attended had a good time. Sunday, Jake had arranged a pig roast at the finest restaurant in Mulege. All who attended had a wonderful meal and a good talkfest.

On Sunday, February 18th, the rally began to break up. Some of the riders began to head north and two of us headed south to Cabo San Lucas.

Ed and Zane Tetreault and I, headed south to Cabo San Lucas. We spent the night about 50 miles south of La Paz, in Todos Santos, on the Pacific coast of Baja. Nice little R.V. Park with four spaces on the edge of town. Nice quiet night's sleep, but in the morning we awoke to water, water, water. The fog and the Pacific coast combined to create dripping tents and rigs. But we rolled up the wet things wet and continued on to Cabo.

We saw Cabo and took some pictures and then continued on north. We spent that night in Ciudad Constitucion, where some interesting things occurred. While returning to the roadway after trying to find a night's lodging at a campground, my fairing mounts broke. The bump from the shoulder to the pavement was probably eight inches. We repaired it with hose clamps and two bungee cords. Then, while filling my gas tank, the attendant lost the nozzle in my tank. (Oh Great!, I said.)

We found another campground and had a hot shower and had dinner. Ed's wife Zane, decided to shower in the morning and did, but no more hot water.

We continued on that day until we got to Jake's home and had lunch there. I copied some more names from his guest book and we settled up on paying for the T-shirts that Jake had made up for the rally.

Rally..

BRASS MONKEY RALLY, MULEGE, BAJA, CA, MEXICO..

After lunch we headed north again and spent the night at Guerrero Negro. We stayed in a very nice motel there (\$28.00 for the three of us with ample hot water).

The next day would be a long one. We drove 460 miles from Guerrero Negro, to the border in Tijuana, and then after crossing the border (yes, I did declare my gas pump nozzle), we Motel 6'ed it in Chula Vista. The last 100 miles before the border, we rode in rain after dark. That was the only bad weather we had for eight days.

We were home in Lancaster (250 miles) by 11:00a.m., Thursday, February 22, 1996. I had traveled 2,960 miles round trip. Ed and Zane, of course, had an additional 3,600 miles from Washington. All in all, it was a good trip and lots of new things to see and experience.

Next year we will be in California. We haven't decided just where as yet, so keep your eyes on this space and Dave and I will let you know.

Those attending were: Visiting El Centro and never seen again by me were Sidsel Wold and Ragnar Kvam, who were riding in a van with some friends from San Diego and were just going into Baja a short way to sightsee. They are sailing a 37 foot sailboat around the world.

Ed and Zane Tetreault from Northport, WA, on a 1985 GL1200/Motorvation Formula II.

Dave and Barb Tyler from Maryester, FL, on a 1989 GL1500 with trailer.

Mike and Connie Norquist on a 1989 GL1500 with Bunkhouse trailer, from Yelm, WA, wintering in Yuma, AZ.

Dave Tenpenny from Tucson, AZ, on a 1965 BMW/1952 Steib.

Joe Rasco from Tucson, AZ, on a BMW K75 with 156,500 miles and always a smile.

Pat Ryan from Brighton, CO, on a 1995 BMW R100GS.

Dan Posaschuk from Regina, Sask. Canada, riding an airplane.

Ruben and Joan Guerra from Phoenix, AZ, riding a BMW K1100LT/California III.

Greg Dawson from Mesa, AZ, on a BMW R65.

Dennis Grimmer from Victoria, B.C. Canada, riding a Yamaha DT200.

Mike and De Ann Stirling from Amado, AZ, riding a 1982 BMW R100RT/Ural.

Bob Horsch and Donna Rameriz from Tucson, AZ, riding a 1978 BMW R100S.

Bill (The Rev.) Schnell from Battleford, Sask. Canada, riding a G10 Chevy.

Rainer Huck from Salt Lake City, UT, riding a 1993 XR600 Honda.

Jeff Coult from El Sobrante, CA, on a BMW GS.

Dave Mc Queeney from Marina Del Rey, CA, riding a BMW.

Jack Rayburn from Leona Valley, CA, riding a GL1100/EML.

Bill and Billie Stone from Ridgecrest, CA, riding a Honda Sabre/California II.

Wayne Marsula from Escondido, CA, riding a BMW GSPD/ custom off road hack.

Greg Ruggles from Temple City, CA, riding a BMW R100GS.

Ramon Becerna from San Jacinto, CA, riding a Honda ST1100.

John Harrison from Grass Valley, CA, riding a 1995 BMW R1100GS.

Bud Spar from Milwaukee, OR, riding a 1994 BMW R100GS.

Maurice Berger from Oroville, CA, riding a 1990 Kawasaki Voyager XII.

Rally..

BRASS MONKEY RALLY, MULEGE, BAJA, CA, MEXICO..

Wayne Wright from Prescott, AZ, riding a 1985 BMW MOORS.

Pete and Carmelita Bollier from San Francisco, CA, riding a 1989 BMW R100GSPD.

Phil Frederico from Anaheim, CA, riding a 1985 GL1200 Honda.

Bill Battle from Glendale, CA, riding a 1991 BMW R100GS.

Yvonne Miller from Rancho Palos Verdes, CA, riding a 1987 BMW K75.

Myself? Jack Zollars from Lancaster, CA, riding a 1984 GL1200/Vetter Terraplane.

And finally, Red Hartman from Sierra Vista, AZ, riding a 1994 Ural rig.

We all kidded Red about keeping up with the rest of us on his Russian rig, but he was always there when we stopped and as far as I know, had no troubles at all. His rig ran from El Centro, at approximately 55 mph and to Mulege, with no problems. This isn't a product endorsement for the Ural, but a few of us are thinking. Red made the trip a little more fun with his attitude and never let us down with his good humor and steel butt.

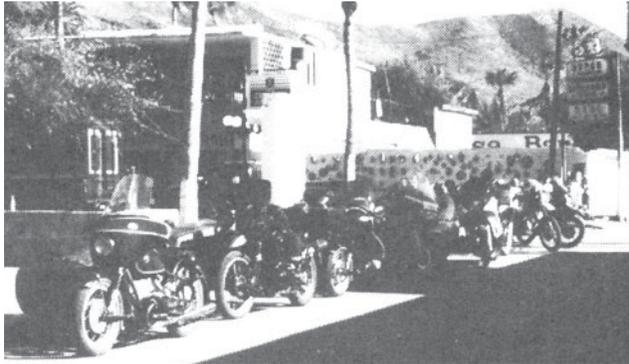
My thanks to Jake for hosting us and to all who came. See you all next year.



Scene at dinner.

Rally..

BRASS MONKEY RALLY, MULEGE, BAJA, CA, MEXICO..



Some of the rigs lined up near the restaurant;



Sign "alerting" riders to direction of Jake's place, just visible at upper right of photo;



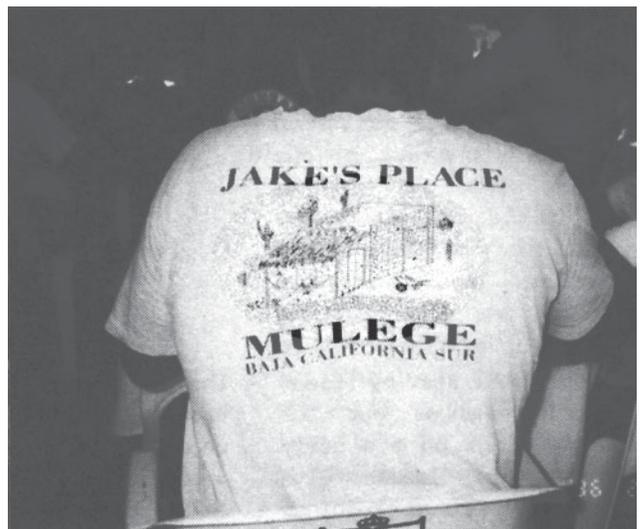
Where the meat was barbecued and served for dinner.



Jake (seated) talks to riders at dinner;



View of Jake's place, part way up the mountain road;



T-shirt made for the occasion;

Photos: Billie Stone.

Rally..

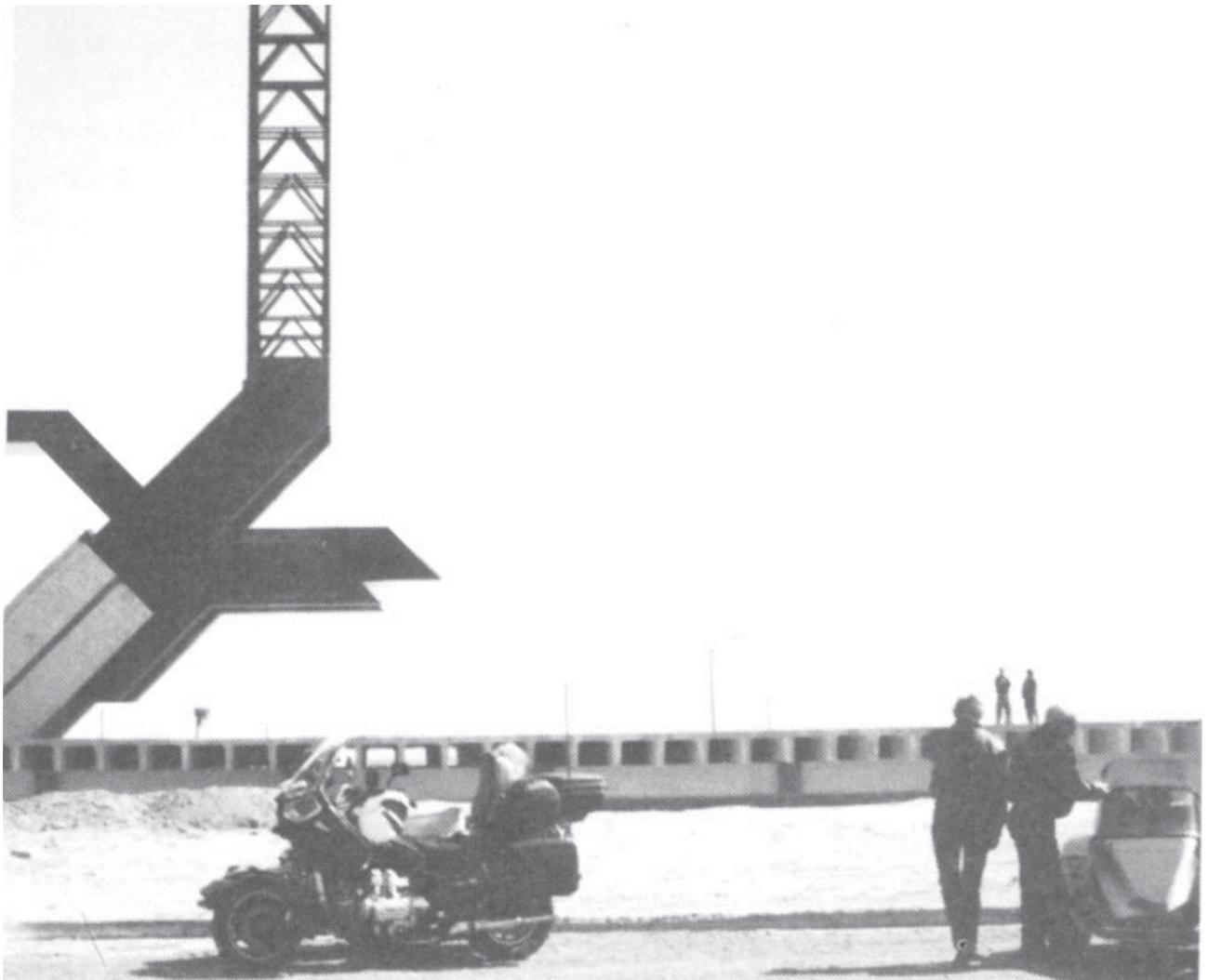
BRASS MONKEY RALLY, MULEGE, BAJA, CA, MEXICO..



Bikes and rigs lined up near restaurant in Mulege, where Brass Monkey Rally dinner was held. Bill Stone (on left) visits with Red Hartman, from Sierra Vista, Arizona.



Bill Stone and Jake at Jake's place.
Photos: Billie Stone.



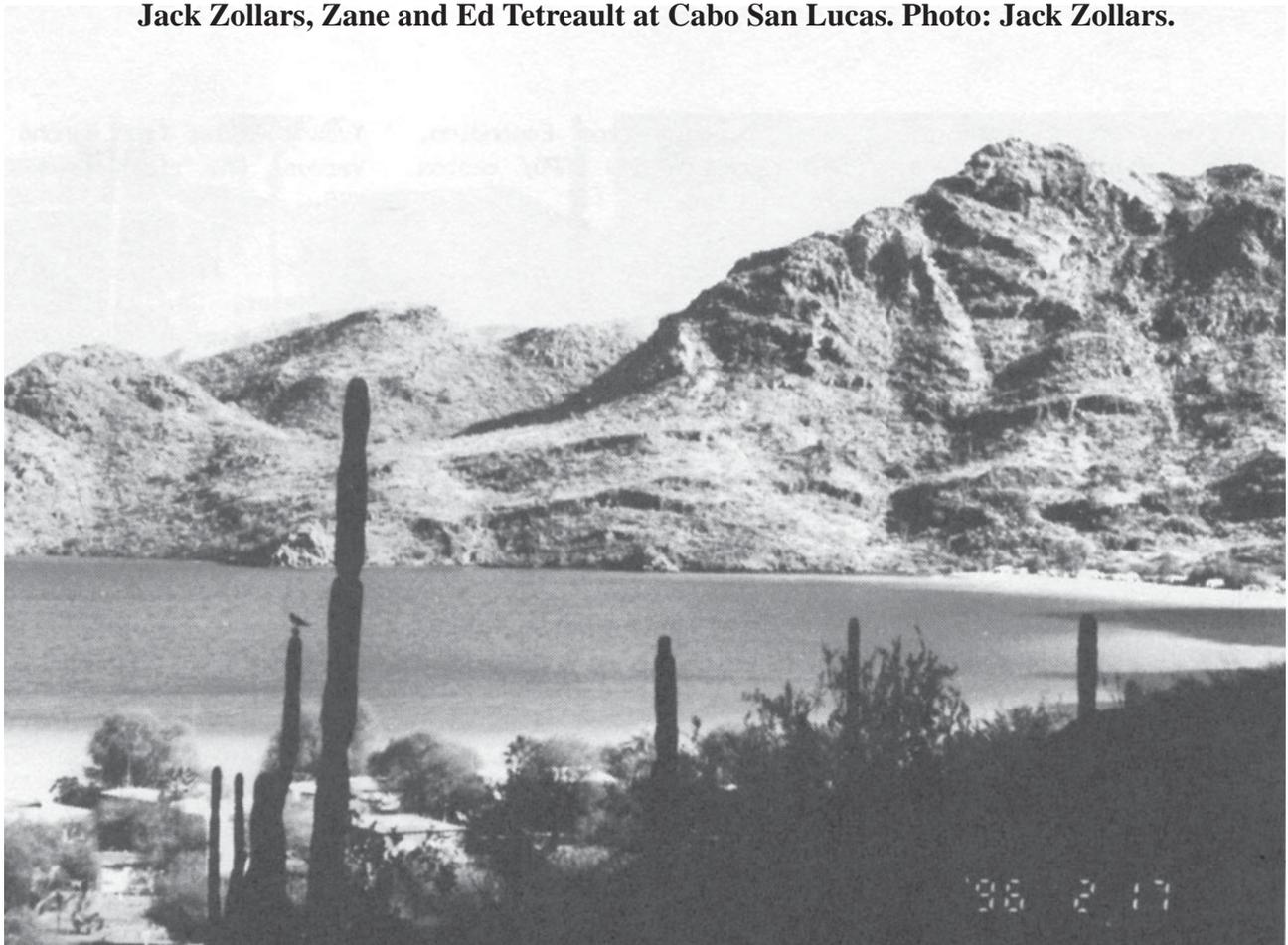
Stylized eagle at 28th Parallel at Guerrero Negro, Baja California, Mexico. Photo: Jack Zollars.

Rally..

BRASS MONKEY RALLY, MULEGE, BAJA, CA, MEXICO..



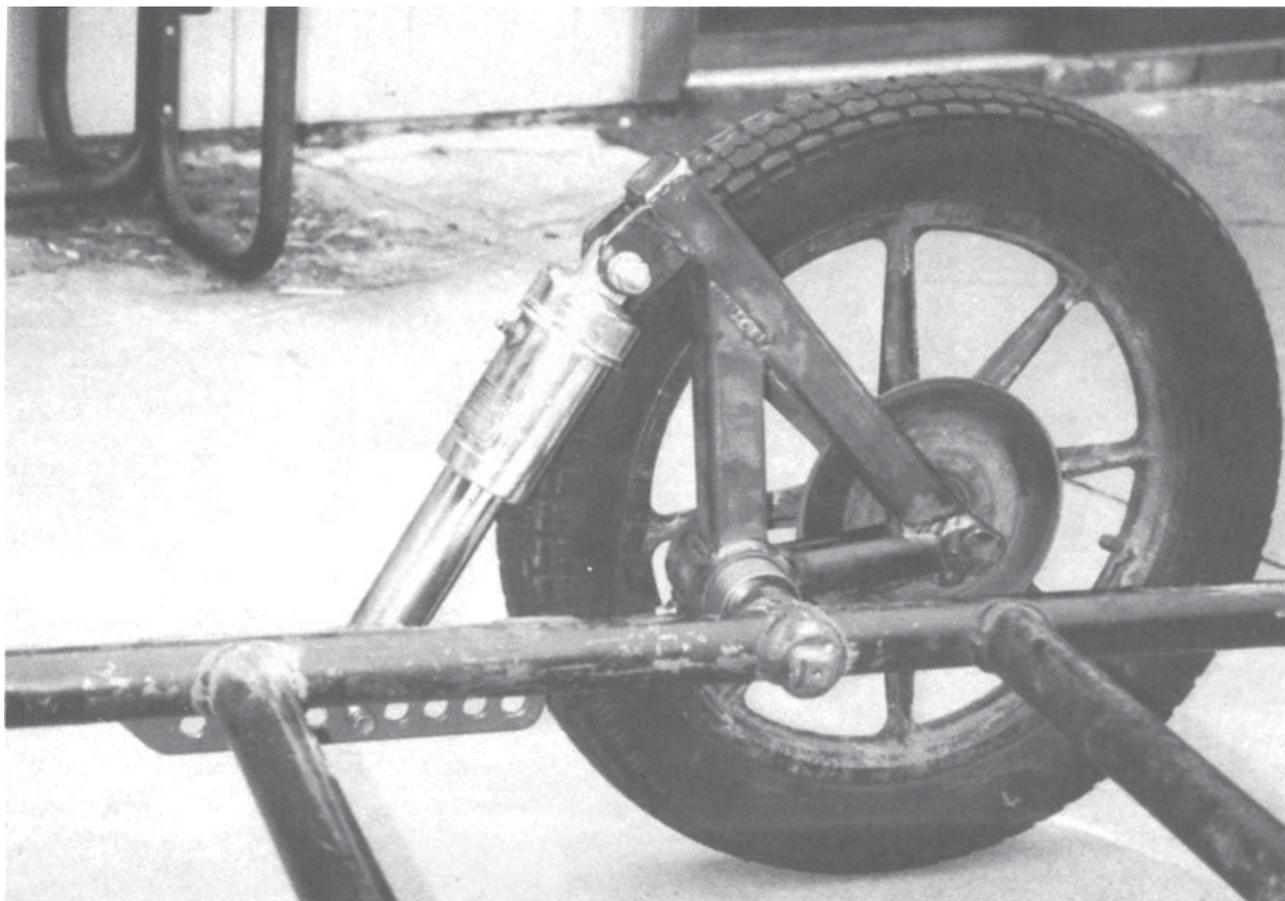
Jack Zollars, Zane and Ed Tetreault at Cabo San Lucas. Photo: Jack Zollars.



The view from Jake's front porch or patio. Photo: Billie Stone.

S/C Upgrade

IMPROVING SUSPENSION OF A CALIFORNIA SIDECAR



By Robert Bolton

About a year ago, my friend Dan and I changed out the original bushings on his early model California sidecar, with some home-made bronze bushings with more surface area. These proceeded to wear at an alarming rate until the slop in the swing arm was unbearable. Dan called California Sidecar, and they told him that the bushings were good for only 10,000 miles and sold for more than \$30.00 each, for a plain bronze bushing. This was unacceptable, since he rides about 20,000 miles per year on his rig.

We then decided to replace the bushings and torsion bar setup with standard trailer size tapered roller bearings and a real shock absorber. This necessitated a rebuild of the swing

arm and the addition of a lower mount for the shock. Dan went to a motorcycle junkyard and picked up an air over oil shock absorber with adjustable damping (brand unknown) from some big cruiser. The eye to eye length was 13 inches, which seemed about perfect for the job. he also picked up a stub axle, standard trailer bearings and races, and a seal from a trailer supply company.

The first order of business consisted of removing the old torsion spring and bushing setup and then cutting off the old swing arm mounting shaft, flush with the boss on the frame of the sidecar. Since this shaft is hollow, to allow torsion springs to operate, we turned down the trailer axle stub to fit the inside of

S/C Upgrade..

IMPROVING SUSPENSION OF A CALIFORNIA SIDECAR..

the old shaft. We milled a 3/4 inch square on the end of the new axle shaft to fit into the old torsion spring mount on the inside of the sidecar frame and welded it there. We then made a bearing carrier 4 inches long, 2-1/4 inches in diameter, counter bored to a light press fit, 1 inch deep on one end, to hold the bearing outer race and the seal, and 5/8 inch deep on the other end for the race and cap. I didn't want to weld the swing arm to the bearing carrier because I was worried about warping the bearings, and we also wanted the flexibility to adjust the swing arm in and out on the pivot shaft. The diameter of the new bearing carrier required us to expand the diameter of the old swing arm mount to fit. This turned out to be no big deal as the steel was quite malleable. We just pried it open large enough to get the new carrier in, then closed it up to fit, with a vise. We reused the old pinch bolt holes but used 3/8 inch bolts instead of the original 1/2 inch ones. This poses no strength problem because the bolts are not being used as part of the suspension height adjustment any more.

The next item was to fabricate an upper mount for the new shock absorber. I had some 1-1/2 inch square tubing with a 3/16 inch wall, left over from a trailer building project. We cut off a piece about 13-1/2 inches long and coped the end to fit the axle end of the original swing arm, and welded a cap on the end. We then cut a piece 7 inches long to use as a brace from the swing arm to the new upper mount. We then made two plates out of 1/4 x 2 inch flat bar to hold the upper end of the new shock and tacked them in place. After we checked everything we welded the assembly solid and then started on the lower mount.

The lower mount is a piece of 2-1/2 x 1-1/2 inch angle iron with a 1/4 inch wall. we decided that we should have as much adjustability as possible, so we designed the lower mount with 9, 1/2 inch diameter adjust-

ment holes 1 inch apart. We spaced the mount so that with the swing arm in its lowest position, relative to the sidecar frame, the shock was about vertical. This turned out to measure 6 inches from the center of the swing arm pivot to the first hole in the lower mount. We welded the angle to the bottom of the sidecar frame tube, with the inside of the angle flush with the bottom of the frame tube, and then added 3, 1/4 x 2 x 2-1/4 inch braces, welded to the top of the frame tube, to triangulate and stiffen the lower mount. I took a surplus Chevy lower shock stud and turned it down to fit the hole in the shock. I left the other end alone since it had a 1/2 inch fine thread on it and was perfect for our purposes.

This whole operation turned out quite well and now Dan has a safe, solid platform for his sidecar. He currently has removed the fiberglass body and has installed an aluminum, across the bed, truck tool box, and is using his rig for his antenna and satellite dish service business. Yes, he can carry an entire seven foot satellite system on the rig, including all necessary ladders and tools.

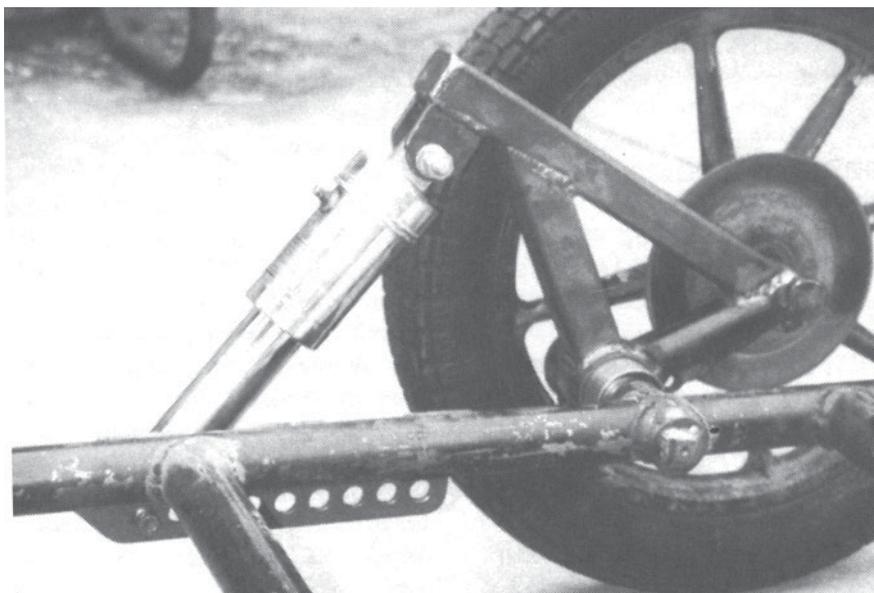
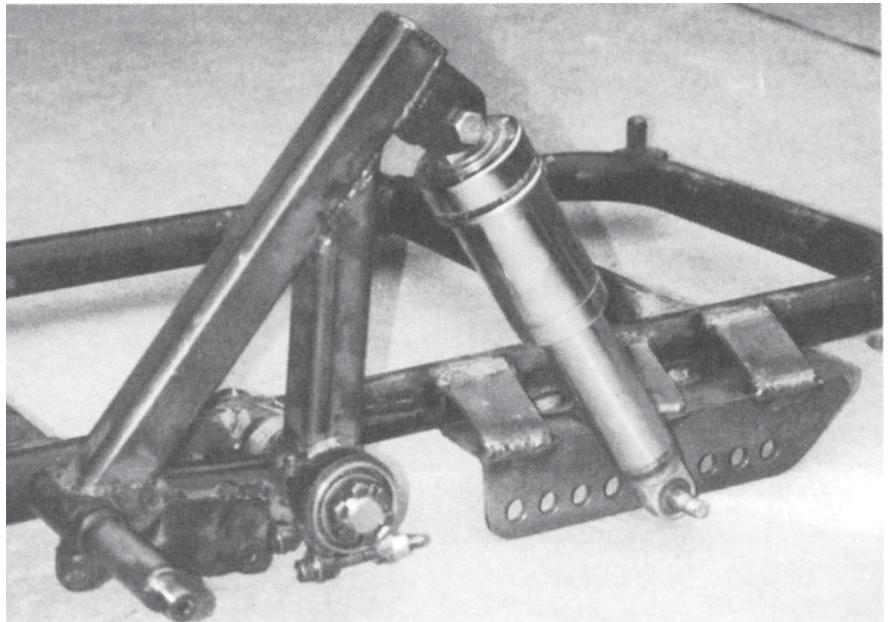
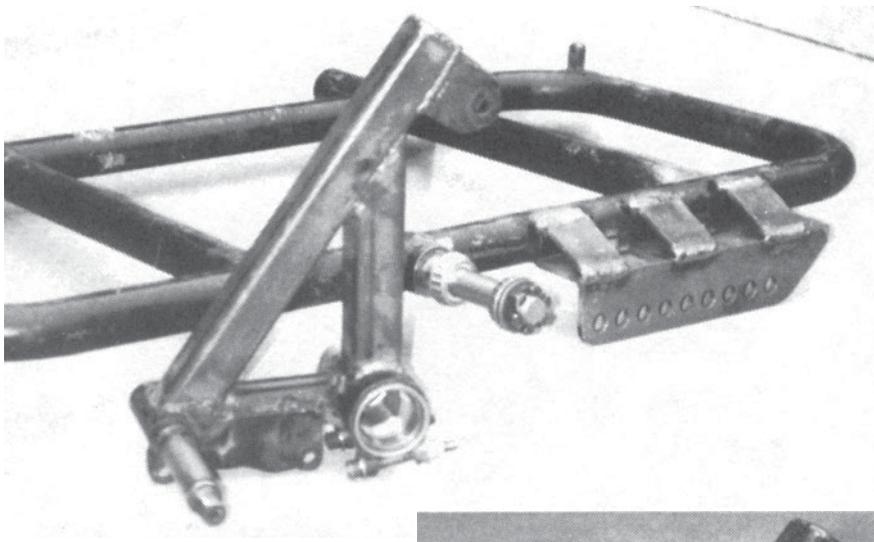
This is the second time that I have modified and added an air shock to a sidecar. The first time, I installed a Chevy air shock on my home brew, double-wide Velorex. This too, worked quite well and is currently in service.

I can recomend this modification to anyone who needs additional carrying capacity or wants damping on their suspension.

As usual, if anyone would like additional information, I will be happy to help. Just send a S.A.S.E. to Robert Bolton, P.O. Box 130, Columbus, TX 78934, or call (409)7322821, or E-mail to R.BOLTON1@GENIE.COM.

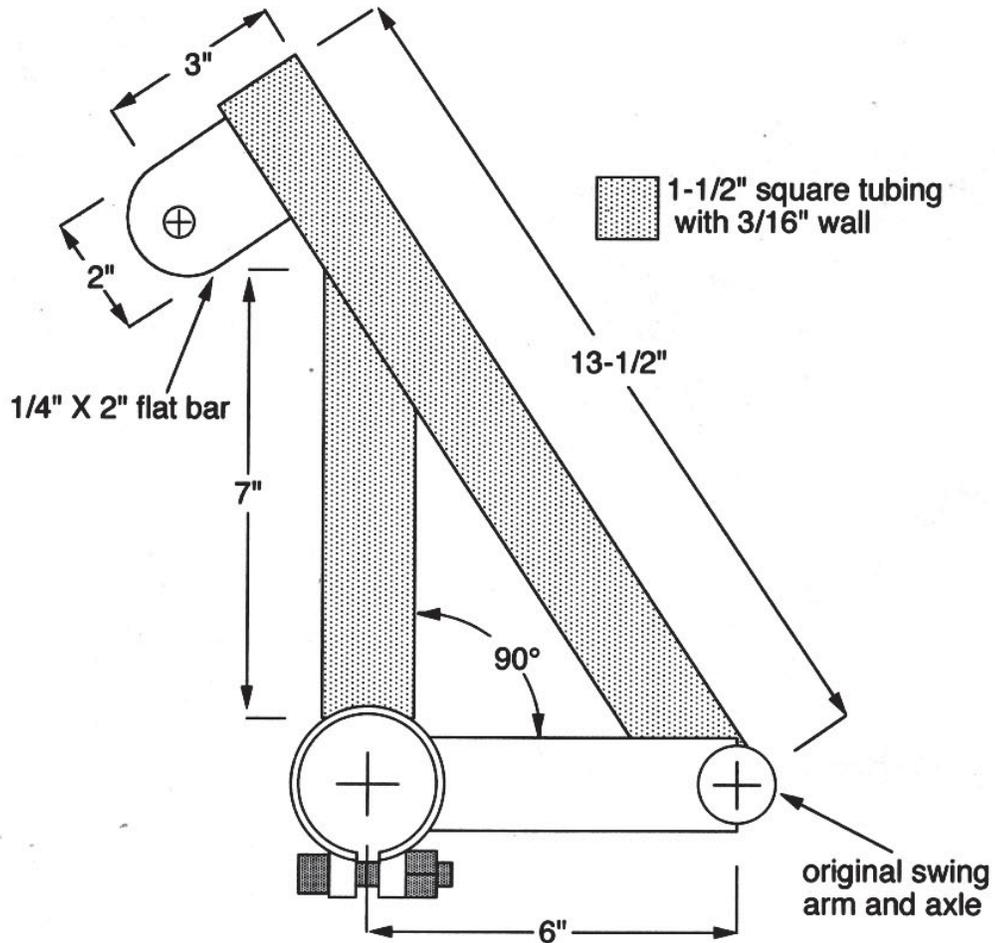
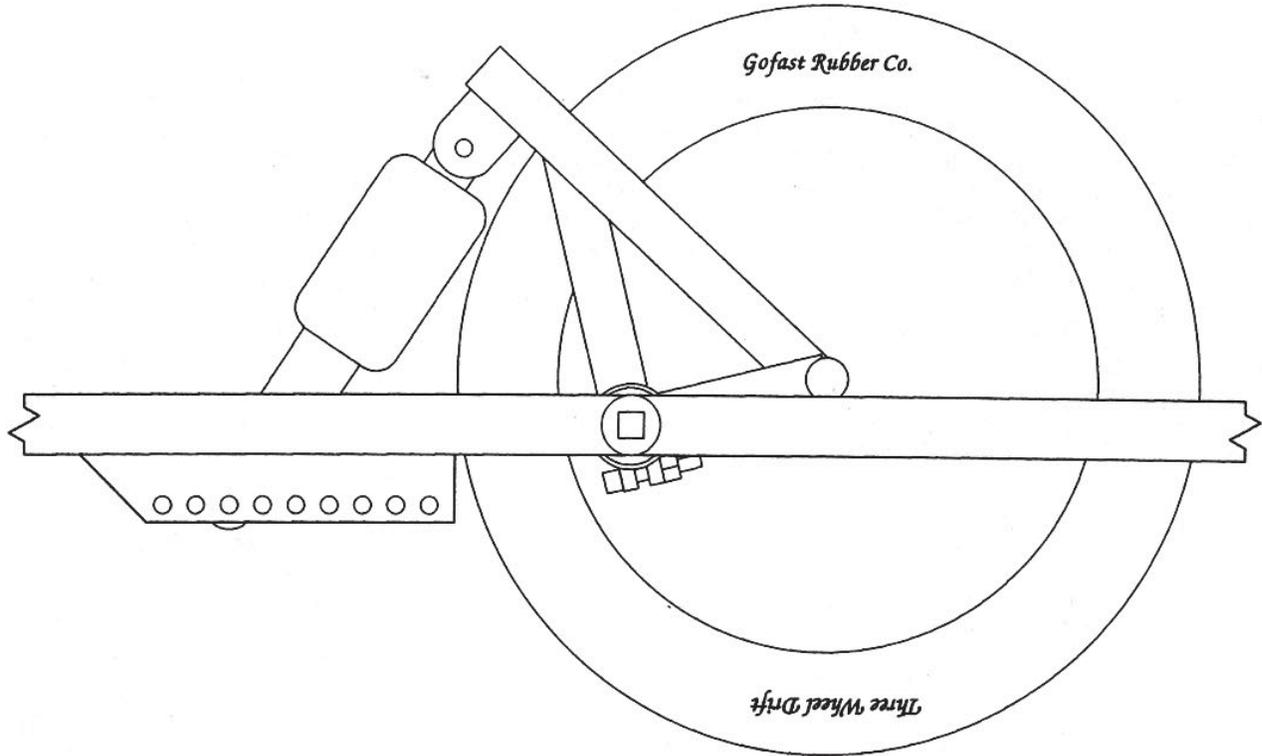
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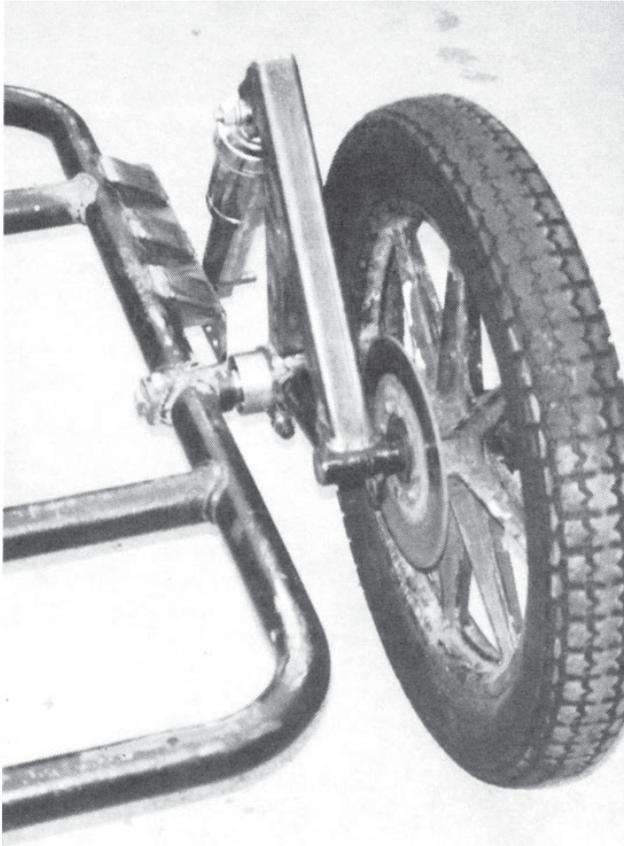
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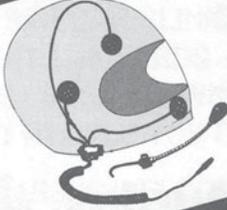
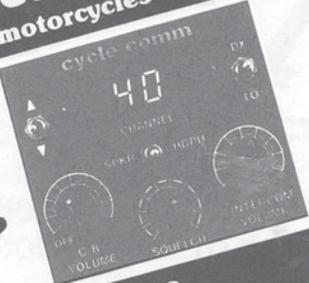


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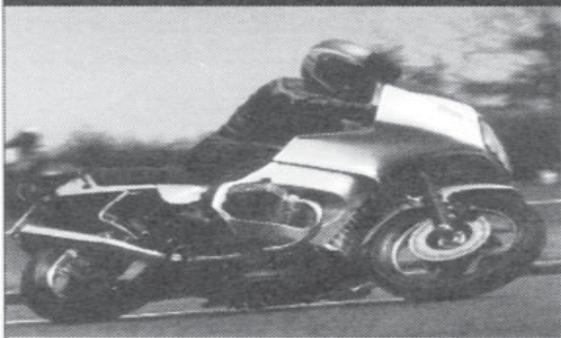
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Outfits

MITCHELL SIDECAR

By Ed Johnson

At least three Mitchell sidecars were built. The engineer, Wally Mitchell (the gentleman far left in photo with white hair), and his workshop are depicted in the accompanying photos, which were taken by "Bassie", in 1982.

I know of one man that purchased one, and another is displayed in the museum section of Bollenbach Engineering, East Dundee, Illinois. I have seen the other unit, but do not know of its whereabouts.

Wally mentioned to me that he was concerned about liability if he went ahead and manufactured and sold more units. This may be why he discontinued producing this articulating sidecar. The sidecar wheel also turned in the direction the rig was turned.

In 1982, Wally Mitchell brought his novel outfit to a sidecar seminar held at Northeastern Illinois University, Chicago, Illinois, the original site of sidecar training.

Pictured is Tim Colburn, Chief Sidecar Instructor, piloting Dale McCormick, Chief MSF Instructor, in the sidecar, through the cones on the range.

No harm done, but the motorcycle and sidecar did end up in a snow bank, pointing up the fact that additional training and experience would be necessary to learn how to properly handle this arrangement.

As a result, a decision was made that we would only train in our sidecar program, with rigid sidecars mounted on the right side.



INSTRUCTOR CORNER

By David L. Hough

SSP Range Cards

Sidecar Safety Program Exercise #9 has been successfully revised, and Thomas Van Horn has modified the range cards. If you missed the change, the reasons were covered in the March/April The Sidecarist. We owe Tom a round of applause for producing an excellent set of plastic-coated range cards, similar to those used in Motorcycle Safety Foundation courses. Tom obviously knows what's needed out in the real world. Do you think this may have something to do with the fact that he is an MSF certified instructor as well as a USCA instructor, and also a member of both BMWMOA and AMA? Tom's range cards are spiral bound, and "largely" waterproof. If you don't have the latest version of the SSP range cards, contact Thomas Van Horn at 401 Park Way #2, Madison, WI 53705-2640.

Exercise #9 may appear to be complex, but it is really quite simple. The first part is to get the driver to explore what happens as the rig rounds a tight circle. When I'm teaching this, I stand in the center of the circle, and gesture to the driver to keep tightening the circle. The small circle keeps speeds slow. In the second part, I stand in the center of the circle but then step outside and point towards the other end of the range to encourage the driver to steer off on a tangent with the sidecar wheel balanced in the air.

I provide very little coaching in part 1, other than to gesture them to slow down if they attempt to increase speed rather than tighten the circle. Rather than complicate the situation by over-explaining about steering reversion, I allow them to explore the exercise. However, if a driver gets the car up to high and then flies off in an uncontrollable direction in part 1, I remind the driver that pushing on the right grip will bring the car down.

In part 2, there is a "survival" tendency to roll on the gas in an attempt to lift the sidecar. But it is countersteering that controls both sidecar lift and direction. Experienced motorcy-



clists seem to have more difficulty mastering steering reversion than novice riders. It is important for drivers to master steering reversion, so that they can instantly change from direct steering to countersteering depending upon whether the sidecar wheel is on the ground or in the air. If an assistant instructor is available (at the other end of the range) the assistant can provide coaching about countersteering after the driver brings the outfit to a stop. These coaching tips are on the range cards.

Driving A Sidecar Outfit

Review copies of text for the new USCA book, Driving A Sidecar Outfit, have been sent to a number of USCA members, and also to a few selected sidecar dealers/manufacturers. Feedback has been very positive, and so far no one has disagreed with the overall layout or concept. The book is a "generic" version of the book Driving A Ural which Ural America Inc. will provide to all Ural dealers and owners. As this is written, Ural

SSP..

is in the process of sending their book to the printer, so it should be available to Ural owners by the time you read this.

The idea for a USCA manual (which has now been named *Driving A Sidecar Outfit*) was generated at the 1995 USCA National. The concept at that time was to provide a text which would serve both as a training guide and also a "do-it-yourself" manual for those who do not have the advantage of a formal training course. A third purpose has recently surfaced: the need to replace time-consuming lectures by dealers/installers with printed handouts. All the sidecar dealers/installers with whom I've talked report a problem giving the same lectures about sidecars, selection, rigging, and driving techniques over and over again to different potential customers, even though many of these individuals subsequently decide not to buy a sidecar. The dealer can spend a lot of time for nothing. One idea which has surfaced from *Driving A Sidecar Outfit*, is to provide the "Lessons" as individual handouts. Instructors might also find these "Lessons" useful as handouts to students following that portion of the class. It's an idea we're looking into, and a set of lessons has been provided to one manufacturer to see if the concept has merit.

We also recognized that a large percentage of new sidecarists are also new motorcyclists, especially those who purchase a complete combination such as the Ural. So, the book starts with "learn-todrive" information, and works up through novice exercises to the advanced lessons and exercises very similar to what we use in the Sidecar Safety Program.

For those of you who have received review copies of the text for *Driving A Sidecar Outfit*, it would be helpful to me to receive any comments, complaints, and suggestions as soon as possible, so that I can incorporate your ideas into the eventual book. USCA has access to the photos and illustrations used in the Ural book, so many of the photos will be of Ural rigs being driven. I'm also looking for someone with experience in high quality photography, who could assist in

taking (or providing) specific photographs suitable for publication. Eventually, we will be looking for someone who could assemble a set of master photos/illustrations and be able to oversee duplication of slide or transparency sets for classroom use, similar to what Tom Van Horn has done with the range cards. One of the difficulties is that the illustrations will be in black-and-white for publication, but should be color slides for classroom use.

Sidecar Videotape?

It has also been suggested on numerous occasions that a videotape of sidecar driving techniques would be helpful. It's easy to shoot hours and hours of tape, as you've seen from

"Funniest Video" programs. But it is much more difficult to make a good instructional videotape, as I can attest from experience in the aircraft industry. In my view, we should only attempt a videotape if we're willing to expend the effort needed to do it right. The first steps along the right path are to firm up what we think the problems are we intend to solve with a videotape, who we think the audience is, and the specific techniques we think ought to be demonstrated. That's something to remember as we consider the same questions for *Driving A Sidecar Outfit*. If we can generally agree on the right information and skills for the book, we're that much closer to shooting scenes for a videotape.

It's not too soon to ask for help from the professionals. If you are currently involved in instructional videotape production, or have free (or low cost) access to shooting and editing facilities, and might have time to get involved in such a project, please send me a note at 93 Thunder Road, Port Angeles WA 98362, or call me at (360) 452-0901 (Pacific time zone)

Insurance

Several instructors have mentioned insurance as a large stumbling block to setting up sidecar driver training courses. MSF courses are usually insured through the state safety program, and even with state insurance, instructors are

SSP..

counseled to be certain to follow the curriculum and range conduct precisely. Since neither the MSF nor most state programs have recognized sidecars, we typically can't depend upon liability insurance. We have an alarming liability situation in the United States, where anyone sues everyone at the wink of an eye, especially anyone who sold anything for money. And if we require a fee for the SSP, we're selling a product. There is always the risk of a student not following instructions and getting injured on the range. And it certainly isn't out of the question to have an ex-student turn around and sue the instructor after doing something dumb after training, and getting injured. Being USCA SSP trained does not protect you against a lawsuit, nor does the SSP include any protection.

Many sidecar instructors simply cross their fingers and hope nothing goes wrong. After all, if we are careful about instructions and demonstrations, there isn't likely to be a problem. But any training program faces the risks of an accident. Liability insurance is an important precaution. If you are able to set up a course through a college or non-profit corporation, you may be able to fit within the institution's insurance guidelines, and keep yourself covered. For example, the Safety Council in Seattle is a not-for-profit corporation with a blanket liability policy separate from the state motorcycle safety program. The insurance company for the Council has stated its willingness to cover any course they wish to teach, providing a detailed curriculum is available in advance. In other words, the liability insurance depends upon the underwriter knowing exactly what will be taught. Insurance is one more reason why it is essential we develop a comprehensive text for instruction, and why each instructor should follow the curriculum as precisely as possible.

Another possibility for liability coverage is to become a temporary employee of a commercial firm who provides coverage for employees. In other words, a motorcycle dealer who sells sidecars might agree to "hire" the instructor as a temporary employee, for purposes of training the

dealers employees or customers. That's the deal I have worked out with a commercial firm that is planning to train a number of sidecar drivers for vending work.

A different approach is to form a training school, and incorporate. In most states, a corporation has its own identity, separate from the individuals who are officers or employees. A disgruntled student can sue the corporation, but if your training "school" has no funds, there is little to be gained. You can claim you were merely an employee of the corporation.

You should always have a waiver (release) signed by students. A signed waiver doesn't prevent a dissatisfied ex-student from hiring a sharp lawyer to sue you, but makes it a lot more difficult for the student to argue that he/she didn't understand the risks. MSF courses include a serious disclaimer up front, explaining that the instructor is providing the best available information, but can't be responsible for what the rider does with it.

The liability issue is an important reason for the USCA to produce a comprehensive curriculum which includes a classroom text. For those training sites who can provide liability insurance, a well-developed curriculum helps sell a sidecar course into their insurance plan. For instructors who are willing to teach without insurance, the use of *Driving A Sidecar Outfit* as a curriculum guide helps spread some of the liability around. A detailed curriculum also helps protect the USCA from improper teaching techniques or off-the-cuff classroom instruction. *Driving A Sidecar Outfit* contains appropriate references to the risks of operating a motorcycle, and many suggestions for reducing the risks. And if the instructor follows the text and exercises closely, the curriculum is available for review after the fact, which helps prove what an instructor did or didn't say.

Instructors In Action

Chief Instructors are those certified to teach new instructors how to deliver a certain course. The current Chief Instructors in the USCA

SSP.

Sidecar Safety Program are:

Tim Colbum
Joe Rybacek
Mitch Goldflies
Ed Johnson
Jim Dodson
David Hough

We currently have 60 other SSP instructors spread across the USA. As of December, 1995, the most senior instructor is Ed Johnson, who has trained 390 students. That's students, not age, fellow sidecar pilots. Kurt Liebhaber has 151 to his credit. Mitch Goldflies has trained 145. Al Blacconeri has coached 133 sidecarists through the hoops. Jim Zikuda is listed for 108. And Jim Fousek is credited with 95. Of course there are lots of others who have trained large numbers of students, including Jim Dodson (57), Jeanine Johnson (49), Jim and Joyce Cain (29), and Fred Huntman (26). The bottom line is that lots of sidecar pilots have been given the advantage of training through the SSP.

Instructor Prep Course

Several sidecarists on the West Coast have asked for an Instructor Preparation class, as well as an SSP. I have delayed scheduling any classes in the Northwest, while I focus my efforts on getting Driving A Sidecar Outfit completed and published. This is more a matter of priorities than an unwillingness to conduct training. Remember, that the full course of instruction will include both novice and advanced training. My tentative plan is to conduct an Instructor Preparation class immediately prior to the Sierra Sidecar Spectacular in June, 1997. My assumption is that we will have the new textbook ready by that time, and that prospective instructors will be able to study the text prior to class. Remember, that prospective MSF instructors are required to take the Motorcycle RiderCourse as a prerequisite to instructor prep, and that the typical MSF IP takes roughly a week of intense training. If we expect sidecar training to rise to the level of MSF training, we should expect more comprehensive instructor preparation.



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Coming Events

- June 30 - July 1, 1996, USCA SSP instructor preparation class in conjunction with GWRRA National Rally, Madison, Wisconsin. Info: Vic Hari, (815)265-4547.
- July 6-7, 1996, Keroule Handicap Ride, within 1/2 hr. drive of Montreal, Quebec, Canada area. Info: Roger Symington, (514)247-3582 evs., or CSOC, 94 Longview Ct., London, Ontario N6K 431.
- July 11-15, 1996, Bigfoot Rally, in conjunction with Moto Guzzi Rally, Skagit Co. Fairgrounds, Mt. Vernon, Washington. Bigfoot Sidecar Club, 6115 216th St. RR11, Langley B.C. V3A 6Y3 Canada. (604)534-6473
- July 12, 1996, NEHPD M/c 10th Anniversary, Fred Henne Campground, Yellowknife, NWT, Canada. Everyone welcome! Info. NEHPD M/c, Mike Marston, P.O. Box 35, Turner, ME 04282. (207)225-3065.
- August 1-4, 1996, USCA National Rally, Livingston County 4H Park, Pontiac, Illinois. Info: Ed Johnson, 703 First St., Manhattan, IL 60442. (815)478-5609.
- August 2-3, 1996, USCA SSP at USCA National Rally, Pontiac, Illinois., \$30 fee. Classroom, Friday, 1-4:30p.m., Range, Saturday, 8:30a.m. - Noon. Info: Ed Johnson, 703 First St., Manhattan, IL 60442. (815)4785609.
- August 2-5, 1996, Canadian Sidecar Owners Club annual rally, KOA campground, Lundy's Lane, Niagara Falls, Ontario, Canada. Info: (905)5637378 or (905) 358-7096.
- August 5-11, 1996, Black Hills Motor Classic Rally and Races, Sturgis, South Dakota. Info: (605)347-3418.
- August 8-11, 1996, Tri-State ut and Craft soy, Rajsua P.O. Box 1476, Montague, NJ 07827.
- August 10, 1996, Sidecar Safety Course, College DuPage, Glen Ellyn, Illinois. 9:00a.m. to 6:00p.m. Fee: \$30. Info: (815)753-1683, including requirements, confirmation and registration.
- August 10-11, 1996, Annual Concourse DIElegance and Campout, at Highland Park in Ben Lomond, California. Info: Neil Jameson, 390 Hallson Lane, Ben Lomond, CA 95005. (408)336-2476.
- August 16-18, 1996, Keystone Sidecar Group Campout. Info: Harry (412)963-8327.
- Adirondack Sidecar Rally, Crows Nest Restaurant, North Hudson, New York, Rt. 9. Rally fee \$27. Free camping, saturday night steak roast, sunday morning breakfast, tours, rally awards, gifts and field events. Motels in area. Info: Al Lewis, Northeast BMW Club, 136 John St., Hudson Falls, NY 12839. (518)747-7249.
- August 25, 1996, BMW/Ride By Side Reunion Picnic, 1:00p.m., Cramton Park, Lapeer, Michigan, M24 & Genessee St. Info: Tom Morse, Mid Michigan BMW, 6300 Church St., Marlette, MI 48453. (517)635-4865.
- August 30 - September 2, 1996, Mirror Lake Unrally Campout. Info: Bigfoot Sidecar Club, 6115 216th St. RR11, Langley B.C. V3A 6Y3. Canada. (604)534-6473.
- September 21-22, 1996, Ears Across the Border,, Lake Cushman Resort, Hoodspport, Washington. : Bigfoot Sidecar Club, 6115 216th St. RR11, Langley B.C. V3A 6Y3. Canada. (604)534-6473.
- September, 1996, So-Long Summer Sidecar Campout, Muscatatuck Park, Indiana. Dates to be announced. Info: Hoosier Hacks, Fred Huntteman (317)831-8105.
- September, 27-29, 1996, 6th Annual Freeze Your Buns Gypsy Tour. Pre-registration only by 15 Sept. Info: Mike Marston, P.O. Box 35, Turner, RE 04282. (207)225-3065.
- October 19-20, 1996, Annual Oyster BBQ & Campout, Sierra Pacific Sidecarists. Petaluma, California. Info: 1281 Avis Dr., San Jose, CA 95126.
- October 26-27, 1996, 25th Anniversary Griffith Park Sidecar Rally, Los Angeles, California. Info: Doug Bingham, Side Strider, 15838 Arminta St., Unit 25, Van Nuys, CA 91406. (818)780-5542.
- December 2, 1996, Bigfoot Christmas Party. Info: Bigfoot Sidecar Club, 6115 216th St. RR11, Langley B.C. V3A 6Y3. Canada. (604)534-6473.

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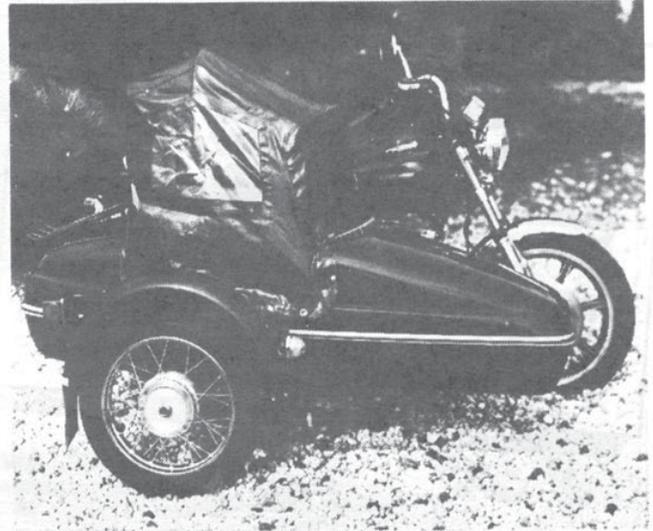
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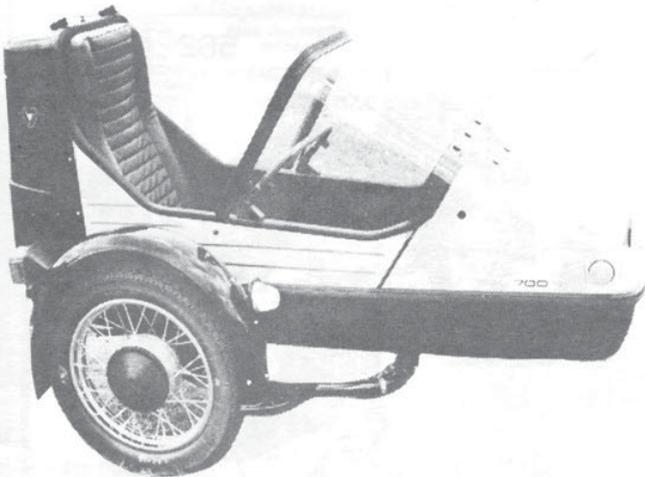
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1980 1000 Harley Sportster, new tires, new brakes, new chain, lots of chrome, ready to go, 21,000 miles, \$5,000. Mick Brannan, 1171 E 1100 North Rd., Taylorville, IL 62568. (217)824-8420

1982 GL500 Silverwing Interstate w/1995 Velorex 700 Delux sidecar, silver & black, w/ new pinstriping, extras, showroom cond., \$4,000. Mick Brannan, 1171 E 1100 North Rd., Taylorville, IL 62568. (217)824-8420

1981 GL1100 Goldwing dresser w/Calif. sidecar extended 18" storage behind seat, also cargo trailer, all burgundy paint, lots chrome, \$4,500. Mick Brannan, 1171 E 1100 North Rd., Taylorville, IL 62568. (217)824-8420

Box trailer, 42 x 36 x 12, waterproof top, ind. suspension, 500 lbs. cap., lights, turn sig., brake lights, \$300. Will del. up to 350 mi. from Kingman. Ed Millray, 3670 Hearne Ave., Kingman, AZ 86401. (520)6929413.

1992 Aspencade 1500 GW load with deluxe Champion sidecar, loaded, 2 tops, like new candy apple red, \$13,900. Lee Hunt, 15740 Oak Road, Carmel, IN 46033. (317)896-9004.

1990 Hannigan Astro s/c mounting brackets for 1500 Goldwing 2i gal. fuel system stereo-cassette intercom spoiler on rear must see to appreciate photo. Neil Davis, 413 Chelsea Woods Dr., Lexington, KY 40509. (606)269-8906.

For Sale or Trade:

162 R60/2 very fine condition. Jupiter sidecar. R100 engine. \$3900 or trade for anything of value. Ray Bier, 1225 Hillside Ave., Austin, TX 78704. (512)441-4000.

Wanted:

Vetter mounts for GL1200. For Sale: Vetter mounts for GL1100. Miles Williams, 2613 Shadow Lake Dr., Greenwood, AR 72936. (501)996-4738.

2nd Time Ads

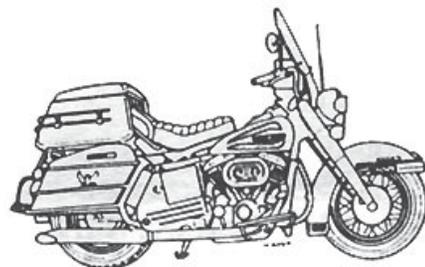
For Sale:

1989 Motorvation Formula 2 sidecar with 1978 Honda 750F. Conv. top, adj. torsion bar, Tracy sport fairing. Looks sharp. \$1,800 080. Mark Mariani, 7952 White Oak Ave., Northridge, CA 91325. (818)881-2084

1975 Moto Guzzi Eldorado Police Special with California Friendship I sidecar, excellent condition, full dress, Emron paint, many extras. \$5,900. Douglas Woodin, P.O. Box 2300 - 1681 Aspen St., Bunnell, FL 32110. (909)437-4263.

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Wanted, brackets to mount Vetter sidecar to 1300 Kawasaki. Bill, 1-901-324-0954 work; 1-901-386-0973 home.



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Include additional information on a separate sheet.

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