## Ultra Van Motor Coach Club

November 1995

WALKER LEAST

President: Gordon Harvey #'s 469, 518, 529

Vice Pres: Jean McMasters #330 Secretary: Maybel Griggs #334 Treasurer: Louis Griggs #334

1994 Newhouse Award: Dan Reinhardt Tech Coordinator: Louis Griggs

All reports of Regional Rallies, advertisements, or other input for the Newsletter are to be sent to the Secretary. There is no charge for advertisements; please allow a 3/8" margin on top and sides, and a 3/4" on bottom of copy (to make room for page number), preferrably using black ink. Any handwritten copy that you want typed should arrive a week or so before the deadline.

All dues are to be forwarded to the Treasurer. (same address) Save yourself postage -- inputs to Secetary and Treasurer can be put into the save envelope. Material for the Newsletter can be folded.

Technical tips are to be sent to the Technical Coordinator - use winter address. Amendments to the By-Laws are to be sent to the President. Look at your address label -- number after name is last two digits of year thru which you dues are paid. Deadline for Newsletter inputs are: February 15th, May 15th, August 1st, and November 15th.

### **Upcoming Rallies**

January 29 - 31, 1996 Southwest Rally, Pheonix, Arizona

March 23-29, 1996 Airstream Part, Christmas, Florida

May 13-16, 1996 Cane Creek Park, Waxhaw North Carolina

September 24-29, 1996 National Rally, Kansas State Fairgrounds, Hutchinson, Kansas

### From the President's Desk- Gordon Harvey

I want to thank all of my Ultra friends for all the prayers, cards, and phone calls during my recent illness. There were gratefully appreciated, and certainly helpful. I believe I'm on the road to recovery now. This has certainly been a tough year for Ruth and me. Let's hope 1996 is a winner.

Remember, we want to make the 30th year National Rally. Everyting seems to be coming along great for this event. So it is "Home to Hutchinsion in '96".

I'm very sorry I could not take part in this restoration because of my health. I certainly tried. Lots of miles, lots of smiles. Hope to see you at the Homecoming.

Editor's corner: Jim L. Howell

This is a transition newsletter. It contains alittle of a newer format and much of the old 'tried and true' format. If you have a suggestion or input, please send it to Maybel Griggs and she will forward it to me.

Some of the changes are being done to reduce both the cost of printing and the cost of mailing. Other changes are planned and will be implemented as time allows.

### TO MY ULTRA FRIENDS

It is very hard to be proud and humble at the same time. But when you, my friends of the ULTRA Club, got together and presented me the Ernest Newhouse Award, I was proud and greatly honored to receive such a prestiquous award. But at the same time, I was humbled, thinking of all the other ULTRA folks who have worked so hard over the years in their efforts to keep the Club strong, viable, and fun loving as they circle up the ULTRAs at each rally.

I give the greatest of thanks to everyone who thought of me, and I ask the Lord for special blessings for the ULTRA Club and all its members.

Sincerely, Dan Reinhardt

# Southwestern Rally Gatherin' of ULTRAVANS in Arizona

Winter of '96

Date: January 29 - 31, 1996

Place: Hope Baptist Church

4842 N 51st Avenue

Phoenix, AZ (602) 846-7785

Directions: From I-10, on the west side of Phx. - exit 51st Ave, turn north, go 3 miles to church.

Hosts: Dan & Betty Reinhardt

(602) 846-6920

Warren & Nobia Suckow

(602) 841-0911

Ed & Jane Harrison

(602) 974-6373

Threasa Vandersteeg

(602) 977-4358

Costs: \$37.00 - per unit - for 2 people (\$11.00 per person over 2)

Fees include: registration, use of parking and fellowship hall areas.

Also 2 evening meals for each person, catered by the church.

Hookups: None (water available on grounds)

Activities: Normal Rally Activities with special local options

available

Extended Activities: We plan to convoy to the Quartzsite, AZ.

Pow Wow Show and Swap Meet for a couple of days.

### Ultra Van #101 Restoration Rally #3

Date:

March 1st - March 13th, 1996

Where:

Desert Rendezvous Ranch 7011 Sunny Vista Road Joshua Tree, CA 92252

(619) 366-9104

Hosts:

Jim & Marlene Craig

Fees:

\$5.00 This will be a donation to the "Project Fund" plus a \$1.00 per day per person Rally fee.

Details: Rally #2 was a great success. A small turnout of seven families got a lot done on the 101. A new rear and main entrance door was built by Chance Fitzgerald, Ed Harrison, Dan and Bob Reinhardt, did electrical, metal repairs & other things. John Shattuck completed the 110 volt wiring & started on finalizing the 12 volt wiring. Lester Bell completed the rework on the sliding window structure that Walt Davison had started. Walt installed new wiring for the head lights & built new closure plates for the L/R chine beams. Many other small jobs were done by all of us. Plus new member Greg Zcopek installed all new metal brake lines from rear to front. Bob Franz completed the lines at the front & installed the rear hubs. Bob Ballew made a new fuel tank filler pipe.

Hopefully during RALLY #3 we will complete all of the items noted below and make it ready for paint. (No we did not make it to the Corvair, Palm Springs Meet with 101, but we had fun anyway)

### Repairs Required:

- 1. Reseal the fuel tank and install cover.
- 2. Install new rear window
- 3. Anchor down new flooring
- 4. Install new windshields
- 5. Complete all electrical wiring
- 6. Install new side windows
- 7. Bleed & adjust brakes
- 8. Install engine & transaxle.
- 9. Repair rear fiberglass panels.
- 10. Finish stripping paint.
- 11. Repair structure at several areas.
- 12. Repair Bumper attach areas.
- 13. Install new fuel filler opening.
- 14. Many other small items.

So throw a few vittles in the old Ultra and come join us for a lot of fun. The rally will also include our usual BAR-B-CUE, POT LUCKS & ETC. A dash plaque will be given to new workers.

## Get the SPIRIT of CHRISTMAS

## At the FLORIDA SPRING RALLY At AIRSTREAM PARK

Date:

March 19-23, 1996

Phone:

(407) 568-2507

(Emergency Phone)

Place:

Airstream Park

25525 E. Colonial Drive

Christmas, Florida (St. Rt. 50) Exit 79, I-95 Activities:

Goddies & Coffee each morning

Tech sessions, Dinner out? Craft sessions, Pot Luck

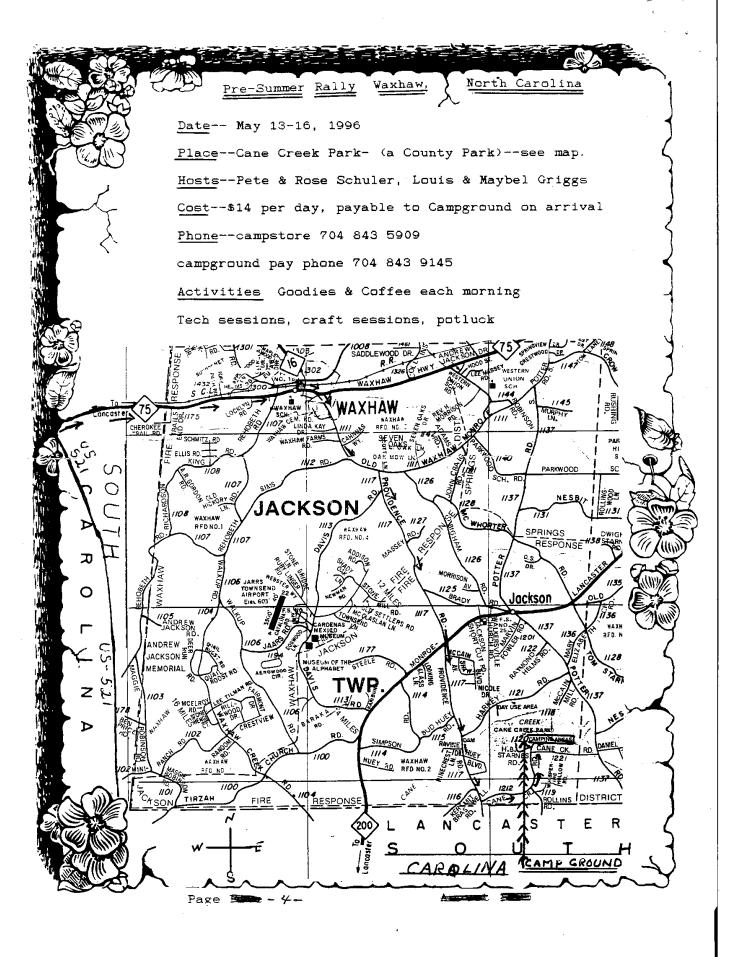
Cost:

\$11.10 for 2 persons

\$2.20 for each extra person

Hosts:

Ackermans, Griggs



### **UVMCC 30th Anniversary Rally**

### September 24-37, 1996 Hutchinson, Kansas

Meet at Cheney State Park, 22 miles south of Hutchinson for night of September 23rd, then convoy to Hutchinson for parade on the morning of September 24th.

Camping at Fairgrounds - \$14.00 per night.
Rally Registration - \$10.00 per coach.
Buffet Banquet and Cosmosphere visit Friday evening \$11.00/person.
Early Bird Registration Special
5 nights camping, 2 Banquet dinners, Rally Registration \$100.00 if paid by August 1st, 1996.
\$110.00 if paid after August 1st, 1996

### **Rally Committee**

Chairman: Norm Helmkay
Registration: Margie Fitzgerald
Crafts: Maybel Griggs
Meet Plaques: Jean McMasters
Rallymaster: Clyde Stanton
Tee Shirts: Don & Mickey Richards
Goodie Bags: Tennie Randle
Meeting Prizes: Louis Griggs
Morning Coffee: Bonnie Granger
Rally Agenda: Pat Fitzgerald

Here is a list of motels within a 2 mile radius of the Hutchinson Fairgrounds. Use this list if you wish to attend the National Rally without an RV.

**Astro Motel**, 15 East 4th, Hutchinson, KS 67501 1-800-633-1168

**Best Western** Sun Dome 11 Des Moines, S. Hutchinson, KS 67505 1-800-530-5462

Comfort Inn at the Mall K-61 & 17st 1621 Super Plaza, Hutchinson, KS 67501, 1-800-4-CHOICE

Quality Inn City Center 15 W. 4th Hutchinson, KS 67501 1-800-4-CHOICE

Ramada Inn 1400 N. Lorraine, Hutchinson, KS 1-800-669-9311

 Scotsman
 322 E. 4th, Hutchinson, KS 316-669-8281

 Super
 8 Motel
 1315 East 11th, Hutchinson, KS 1-800-800-8000

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### Minutes of Meeting of Eastern Member of Ultra

KOA at Silver City, New Mexico September, 21 1996

The meeting was opened at 2:05 PM with Norm Helmkay describing his findings to date. The plan is to meet at Cheney State Park, Kansas, about 22 miles South of Hutchinson on the 23rd of September, 1996. We would then leave on the 24th in a body and proceed to Hutchinson. Rates at the State Park are \$6.00 per night, plus \$5.00 for electricity, if used.

An important facet of the National Rally is that we are committed to have at least 25 coaches there. Theme of the Rally will be "Home to Hutchinson". The City is going all out to extend us a warm welcome.

### Rally responsibilities were distributed as follows:

Chairman: -- Norm Helmkay

Tee shirts: -- Don & Mickey Richards

Plaques: -- Jean McMasters Wagonmaster: -- Clyde Stanton Crafts: -- Maybel Griggs Registration: -- Margie Fitzgerald Rally agenda: Pat Fitzgerald

Goodie bags: -- Tennie & Morris Randle Morning prize gifts: Louis Griggs Coffee & Goodies: -- Bonnie Granger

It was announced that there will be no Rally in January, 1996 in Miami. The meeting adjourned at 3:55 PM.

Respectfully submitted by: Maybel Griggs

### **New Member**

Winfred & Regina Santhuff #385 5711 Randy Drive House Springs, MO 63051 Phone: 314-671-4224

### **New Phone Numbers**

Helmkay's Florida - (941) 422-4535

Jim Howell (Home) - (423) 687-2292

## Board of Director's Meeting Ultra Van Motor Coach Club, Inc Silver City KOA, New Mexico September 22, 1995

The meeting opened at 9:20 AM, with the following Directors present: Jean McMasters, Vice President, who presided at the meeting, Secretary Maybel Griggs, Treasurer Louis Griggs, Jim Craig, Nobia Suckow, Pat Fitzgerald, (Robert Franz and Norm Helmkay, new Directors).

The makeup of the Newsletter was discussed. The Secretary will publish new guidelines - all material to be published will go thru the Secretary, limit advertising space, and try to limit total Newsletter to 2 ounces. Material will be sent to Jim Howell as available.

Two letters from Bill Welle were discussed. His article from CORSA will be published, with due credit.

A new banner for the National Rally was published from the Silver City KOA, by the authority of the Board. Jean McMasters left this Rally with this banner in custody.

Norm Helmkay was authorized to spend upto \$400.00 to update the list of tech tips. When completed, these will be offered for sale to the membership.

The new Technical Coordinator will be Louis Griggs as of January 1996. The Board recommended that all published amendments to the By-Laws be adopted at the General Meeting.

To get younger members with children to attend National Rallies, a time frame of June 15 to August 15 was suggested. This will probably be brought to the membership at Hutchinson. The meeting closed at 10:40 AM.

Respectfully submitted, Maybel Griggs, Secretary

Our sympathy goes out to the families of the following members who have passed away this year.

July 29, 1995 - Bryant Phillipos October 14, 1995 - Betsey Hull October 30, 1995 - George Truman

## Report of General Meeting Ultra Van Motor Coach Club Silver City KOA, New Mexico September 22, 1995

The meeting began at 2:00 PM, with Vice-president, Jean McMasters presiding, due to the illness of President Gordon Harvey. (open heart surgery). Secretary Maybel Griggs read the minutes of the previous National Rally (held at Wilderness Point, Arkansas). The minutes were approved as read.

Treasurer Louis Griggs reported a balance of \$2,874.68 as of 08/31/95.

Agenda item No. 1, referring to Club membership areas was unanimously adopted. Agenda item #2 was also adopted. This item refers to the report of the National Business meeting.

An Audit Committee of Bob Reinhardt and Don Richards was appointed. The Treasurer's book was audited, and verified on 09/22/95.

Norm Helmkay asked to be relieved as Technical Coordinator; this news was received with regret. Norm has done a great job as Technical Coordinator. After January 1, 1996, Louis Griggs will answer this job description.

All persons named on the printed ballot were elected. Dan Reinhardt was elected to the Ernie Award of 1995.

The KOA had a nice banner Welcoming our Club; we bought this banner, with extra letters and numbers, at a cost of \$111.25, as authorized at the meeting. Currently Jean McMasters has custody of this banner.

there was much discussion about how to get younger members of the Club to attend National Rallies. A different time frame was suggested - August 15th to September 15th. This may be taken up at the Hutchinson National Rally. All former owners of Ultra Vans are to be specially invited to attend the Hutchinson National Rally. (September 24-29, 1996)

100,000 mile plaques were awarded to Norm Helmkay and Elga Green. Stars to be placed by the coach numbers were given out by Jean McMasters to the persons who had traveled 100,000 to 500,000 miles. The meeting adjourned at 3:30 PM.

Respectfully submitted by Maybel Griggs, Secretary.

### National Rally Report Silver City, New Mexico September 19-24, 1995

This meeting was held at 6,000 feet in a beautiful low mountain setting in a historic silver, gold, and copper mining area. This could be reached from any direction, but from the east or west it was over some hair-raising roads at 8-8,500 feet. Roads with virgin forests on all sides.

The site was a well-run KOA campground that put on breakfeasts, a hamburger barbecue, and an ice cream social at reasonable prices. The pancakes featured the managing lady's homemade strawberry syrup. The swimming pool was enjoyed by some on the warm afternoons.

### Program:

The tech sessions were led by Norm Helmkay, and the craft sessions by Ruth Boydston and Jane Harrison. Films on alternative cancer treatment were provided by Anita Shattuck who also filled in with commentary. Sunday services were conducted by pastor Jack Neubauer.

A board of directors meeting was held with a quorum present. The general meeting was highlighted by the selection of Dan Reinhardt for the Ernie Award which honors his many years of service in various capacities. Drawings were held for the following prizes: Mexican village tableau donated by Nobia Suckow – winner, Jane Harrison. Two packages of smoked salmon donated by Jean McMasters – winners, Maybel Griggs and Fred Boseman.

100,000 Mile Stars: Richards, Helmkays, Greens, Randles, & Franzes. 200,000 Mile Stars: Griggs & Reinhardts 300,000 Mile Stars: Suckows & Davis's 400,000 Mile Stars: Grangers

500,000 Mile Stars: McMasters

There were 23 coaches, 1 trailer and 1 car present.

<u>State count:</u> Calif. - 5, Ariz. - 4, Fl. - 6, Ohio - 2, and 1 each from Nev., Mich., Wash., New Mexico, and Maryland.

Visitors were the Fitzgeralds from Tucson, New Mexico.

### Ultra Van Motor Coach Club, Inc.

Treasurer's Report 3rd Quarter, 1995

| Balance July 1, 1995: 2853        | .81 |
|-----------------------------------|-----|
| Receipts:                         |     |
| Dues 123                          | .00 |
| Benham (Interest) 23              | .42 |
|                                   | .12 |
| Expenses:                         |     |
| ±                                 | .11 |
| Print Newsletter -215             | .25 |
| Mail Newsletter -133              | .15 |
| Filing Fee -5                     | .00 |
| (Sec. of State, CA)               |     |
|                                   | .00 |
|                                   | .65 |
| Ultra Van Banner purchase -111    | .25 |
| Pastor's honorarium Nat25         | .00 |
| Jackets, etc National -212        | .25 |
| Balance - September 31, 1996 2164 | .69 |

Respectfully submitted: Louis C. Griggs

### Coaches For Sale

#318 Ultra Van, 1967 110HP, Powerglide, Roof Air, mostly original condition, \$3200. Bill Burleson, Roanoke, VA. Ph. (540) 427-4151.

#454 Ultra Van, Second Owner, originally purchased by Dr. Fearing. 110HP, Powerglide. Engine has less than 2000 miles on complete overhaul with all new parts. Newly rebuilt transmission. New Roof Air. New Michelin tires. \$8000. Pictures upon request. Glann Lee, 137 Brooke Elyse Lane, Max Meadows, Va 24360. Ph: (540) 637-6839.

#538 1970 Ultra Van, New Chevy 350 V-8, Travel ready. New or near new batteries, shocks, water pumps, starter, alternator, completely refurbished interior. \$7000. Dori & Joe DeCamillis. Ph: (205) 324-3995.

## Love

and

## HATE

Bill Welle

When first I laid eyes on her, I turned her down flat. Can you blame me? There she sat, in somebody's back yard, in a gritty little mining town in northern Alabama. She had dozens of pock marks and was peeling here and there. Her rear end sagged a bit, too. She was only about 25, but she looked fifty! I was told she spent eleven long years in a Wisconsin cornfield hosting a family of squirrels.

And yet, it seemed to me at least, she had pleasing lines with all the curves in the right places. I thought of the old saying, "Built for comfort, not for speed." My wife (a horsewoman) spoke of another old saying: "It looks like she was rode hard

and put up wet."

But all the way home I couldn't put her out of my mind. I had been allowed first refusal, so as soon as I said no, she already belonged to someone else. That someone turned out to be a retired airline pilot who soon found out that he couldn't keep the likes of her in his posh Goldcoast neighborhood. So I got a second chance, and this time I swiftly presented my check and UltraVan #211 was mine, all mine!

Well, all that took place about four years ago and I have to admit, she was trouble almost from the beginning. In fact, on the way home, my volunteer copilot (a retired Marine fighter pilot who must have been looking for a few more thrills) almost blew us up in a gas station in northern Florida by pouring 16 gallons



of gas in the water tank that leaked like a sieve. Until then I had no idea how many people smoked when driving up to a gas pump, then just to be safe they throw the cigarette out! The whole thing looked like a Chinese fire drill, with me chasing people away from the pumps.

We drove the next few hours in total silence. As soon as we arrived home we shared a few double scotches and he quickly left. Come to think of it, I haven't seen much of him since.

Meanwhile, my wife (who happens to be very partial to fresh eggs) made a longer, more detailed appraisal of the coach and then suggested that when I was through fooling with it, she could convert it into a great chicken house. That simple statement spurred me on for years. And, of course there were times when the fun turned to drudgery and the love turned to hate.

I remember when hurricane Andrew threatened. 211 was perched precariously up on blocks while the universal joints were being replaced, all four of them. Then there was the time I was redoing some wiring (there is a lot, it's 22 feet long). I added some that had already been done by someone else but routed elsewhere and reached the point where I could only shut the thing down by yanking the battery cables. Another time the chopper in the toilet malfunctioned: I think I better quit there. You get the picture, I'm sure.

Anyway, I learned about plumbing certainly, and wiring, bondo, body putty and epoxy, paint strippers, primers and painting. I learned to work with aluminum and fiberglass. I restored the interior as well as the exterior of this historic coach. It has been a great learning experience and I must have done it right because whenever I exhibit number 211 at car shows, it almost always gets an award.

Along the way I joined the UltraVan Club and go to their rallies. Next I joined the local Corvair Club (Gulf Coast Corvairs) and attended their shows, and then I became a member of CORSA. Soon I hope to make it to the National. With this unique vehicle, I can drive to the show, live in it during the trip, and then show it. Incidentally, my wife, who often travels with me, still buys eggs in the supermarket!

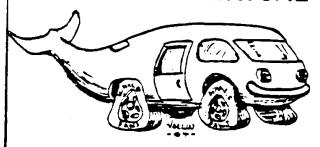
History

This was the 22nd and last coach built by David Petersen in Oakland, California. It was a final prototype and completed in 1965. The company was then sold to Jack Tillotson who began production in Hutchinson, Kansas where about 300 UltraVans were built. Tillotson drove #211 from Oakland to Hutchinson, loading the 3,000 pound vehicle with 6,000 pounds of factory jigs, patterns, and molds (It has a small but permanent sag in the middle!). It then served as a company demonstrator and is pictured in several sales brochures. Eventually it was sold and went through a succession of private owners; I bought it in 1991.



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### TECHNICAL WHALE TALES



"Technical Whale Tales are a collection of technical tips submitted by Ultra Van Motor-Coach Club members. While these tips have been reviewed for content and are believed to be both acceptable and workable, there is no guarantee implied that they will work correctly, nor is any liability assumed by the Ultra Van Motor-Coach Club, the Technical Chairman or the author for any problems that result from the use of these tips." Forward all Tachnical Tips to:
Norm Helmkay, 73 Sargent St., Haines City, FL 33844

This is last Tech Tips I'll coordinate, at least for a while. During the winter, I plan to get the 1991 to 1995 Tech Tips (complete with 30 year index) ready for reprinting as the next Ryerson Ultra Manual update.

Once again, no tech tips came in from the members, so, it was scrape the bottom of the barrel time again. I hope you support our new Technical Co-ordinator with more tips than have come this way in the last year.

Also, I want to comment on what often happens during a Tech Session at a rally. It's not easy to continually come up with new material for every tech session and all too many times, there are smart remarks or comments interjected that destroy the continuity of the group thoughts. If you feel you have a better solution, volunteer to run a tech session.

Norm Helmkay

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TECH TIP NO. 95-27 SUBJECT: Lights-On Reminder
UV MANUAL SECTION 15 PAGE 15-85 AUTHOR Norm Helmkay

#486

Ever left your lights on and come back to a dead battery?

Most new cars sound a warning, if the lights are on and ignition is off.

A device called a "Sonalert" can be used to do the same thing. The Sonalert has a built-in one-way diode that only lets it sound if power is applied to it the right way. They are sold at most electronic parts stores. The one I used has a RED wire and a WHITE wire.

I attached the Sonalert RED wire to Ultra Wire #18 (the dash lights). The WHITE wire was attached to Ultra Wire #74 (+ side of instruments) which is only hot when the ignition is on. To get at the wires, I just removed the screws holding the dash panel, tipped the panel forward and joined the Sonalert wires right behind the dash.

If you get one with different colors, no problem. Try it one way, if it doesn't work, just reverse the two wires. Some people who want to run with their headlights on all the time, connect the alert the other way, so that it is silent with both ignition and lights on.

TECH TIP NO. 95-28 SUBJECT: Correct Wheel Rim Width for 14" Wheels UV MANUAL SECTION 11 PAGE 11-2 AUTHOR Norm Helmkay #486

A common Ultra Van complaint is premature wear on the outer tire edges, even with correct alignment. This may be wrongly interpreted as low tire pressure. Increasing the tire pressure has undesirable results like, harsher ride, more suspension noise, shock damage, etc.

In discussing this problem with Walt Davison, I think he is correct in his belief that Ultra chose the wrong wheel rim width. Page 11-2 of the Ryerson Ultra manual show the width of Ultra Van wheels as 6" X 14 for Corvair coaches and 6" X 15 for V-8 coaches. The Gross Vehicle Weight of 1961 to 65 Corvair Forward Control trucks & vans which use a 5" rim, is very close to the road weight of most Corvair Ultra Vans.

The problem is ... tires of specific sizes are designed to be used with a certain width rim. Tires like 175, 185 and 195 with a 75 Series aspect ratio, generally call for a 5" wide rim, not the 6 inch rims on most Corvair-powered Ultra Vans. If a tire is mounted on a wider rim than the designer intended, the casing and tread assume a different profile than was designed into the tire. The result can be excess outer edge tread wear and possible sidewall failure. Series 60 or 70 Series 14" tires may call for a rim wider than 5 inches.

Ultra Vans from #510 up with 15" wheels and the extra weight of the V-8, use larger 215, 225 or 235 tires for which a 6" wide rim may be correct.

The point is, when considering new tires, check for the recommended wheel rim width for the specific size tire you want. Competent dealers have this information in their tire specification data manuals.

Since new steel wheels (designed specifically for radial tires with safety grooves along each bead) are not expensive. You might consider narrower 14" wheel rims to get better performance from your next set of tires.

TECH TIP NO. 95-29 SUBJECT Camber Cam Flange Plate Update
UV MANUAL SECTION 9 PAGE 9-39 AUTHOR Norm Helmkay #486

Page 9-39 of the Ryerson Ultra manual shows the steel camber adjusting plates (numbered 5 thru 8) which are attached to the rear inner vertical suspension members. Only those plates with turned-up edges really work correctly with the offset head of the camber cam bolts.

Notice the steel plates used for camber adjustments have been attched to the vertical uprights in a horizontal plane. Plates 5 and 6 are slotted to allow some camber adjustment, but 7 and 8 are straight holes which do not allow for any adjustments. If vertical slots were cut in these plates, adjustments could be made.

An unknown number of coaches (#486 is one of them) have the camber plates incorrectly installed in a vertical plane, like plates 1 thru 4 used for toe-in/out adjustments.

If the inner plates are installed vertically, they cannot be used to adjust the camber. The only real fix is to removed them and reinstalled horizontally.

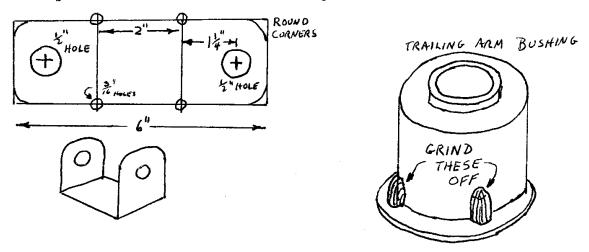
TECH TIP NO. 95-30 SUBJECT Rear Shock Absorber Trailing Arm Mount UV MANUAL SECTION 09 PAGE 9-55 AUTHOR Norm Helmkay #486

Generally, there are two kinds of shock brackets, open and closed. The open style like in Tech Tip 93-27, has a stud sticking out one side. Closed types are "U" shaped, bolted through from one side to the other. I decided the "U" type was easier to make and weld on the trailing arm.

Most original brackets are "U" type made from 1/8th inch steel. Eight inch plate is easily cut and bent in the home workshop without special tools. The trailing arms are also about 1/8th inch, so welding the brackets to the lower rear of the trailing arm doesn't take extra heat as may be needed to weld brackets made of thicker material.

Another possibility is to weld a 2" channel to the rear of the trailing arm with three or four sets of holes, so the bottom of the shock can be relocated in several places to accommodate different lengths of shocks.

In the bracket shown below, drill 3/16" holes at the bend lines before cutting the steel to eliminate stress points which can cause cracks.



TECH TIP NO. 95-31 SUBJECT: Trailing Arm Bushing Replacement UV MANUAL SECTION 9 PAGE 9-50 AUTHOR Norm Helmkay #486

The large outer bushings (GM p/n 3880422 or Clark p/n C2051) in most coaches, will have deteriorated and become very hard over the 30 odd years since first installed. In #486, the rubber was torn and the center hole had become oval shaped.

New bushings have four raised bumps around the outside of the steel case (see diagram above). These bumps were ground off the bushings in the Ultra trailing arms. Nowhere in the Ryerson Ultra manual does it mention grinding off the bumps.

The 1965 Corvair Shop Manual, under Rear Suspension, on Page 4-25, Figure 62, shows the best view of how far the bushing is pressed into the trailing arm (they call it the Torque Control Arm), but the four raised bumps are not shown. On Page 4-31, and 4-32, under TORQUE CONTROL ARM BUSHING REPLACEMENT, it does not say how far to press the bushing in.

BELIEVE ME!!, in Ultra Vans with Corvair trailing arms, you want to grind the bumps off the bushing and press it in all the way to the flange.

Anyone thinking about fixing the TURNBUCKLE problem should become very familiar with pages 10-49 through 10-51 in the Ryerson Ultra Manual.

The 195 X 75 Light Truck tires on #486 had run over 50,000 miles which indicated to me the trailing arm alignment was close to perfect. When the modifications to the trailing arms were complete, I wanted the alignment back the same as when I started.

To do this, I needed a fairly accurate way to determine what the rear alignment was before disassembly. Also, anyone considering having the front-end aligned, should know the rear wheels are tracking straight, before trying to do any front-end alignment work. There are a number of ways to determine how the rear wheels align to the coach body. I am describing a way of doing the job that works for me.

Simply put, measuring points must be established, with all the weight on the suspension, as if the coach was in motion on the road.

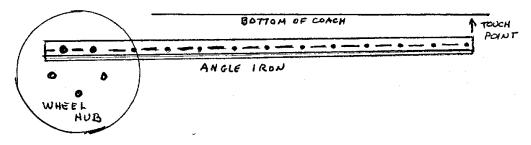
First, I measured from the bottom of the trailing arm to the ground (on #486, its 8") and made two blocks just over 8" high. Each side was raised, the tire removed and lowered onto a block under each of the trailing arms. With parking brake off, the wheels could be turned at running height.

Next, two holes in the end of a six foot length of  $1.5 \times 1.5$ " slotted angle iron were enlarged to fit over two wheel studs. Using washers and wheel nuts, the angle iron was secured against the brake drum with the long end towards the front. This allows the angle iron to be swung up towards the underside of the coach, just outside the tank wall (see DWG:10-BL on Page 10-50).

Where the tip of the angle iron touches the coach, I put a pencil mark and labeled it for reference. Laying on the ground behind the coach, you can sight along the angle iron and see if the gap from the tank wall to the angle iron is even the whole length. If the front measurement is less than the rear, the trailing arm is toed-in. If greater, it is toed-out.

The same was done on the other side (in the case of #486, the front and rear measurements were the same). The distance to the tank wall at the end of the angle iron on either side was also checked to be sure it was centered. Had front/rear measurements differed by over a 1/4" (in 6 ft) I would have moved the outer trailing arm cam bolts, until the angle iron was parallel to the tank wall and toe-in was under 1/4 inch at 6 feet.

Numbers 1 thru 4 on Page 9-39 of the Ryerson Ultra manual shows the various toe-in cam bolt set-ups that Ultra used and Page 9-53 & 54 tells how to use or modify the cam bolt slots to allow toe-in/out adjustment.



At least once a year, it is my habit to inspect the suspension. This year just at the point where the threaded rod entered the turnbuckle lock nut, there was a small rust line coming from a crack in the threads. It was lucky I spotted the crack. When trying to loosen the turnbuckle, the rod snapped along the rust line. This was a signal to replace the turnbuckles and modify the trailing arms. Doing this job is not an afternoon task. Also, to do this job you need welding skills and equipment.

In any case, its better to do it at home, than on the road where the whole rear suspension might cave-in, doing significant damage and possibly even causing a serious accident.

There are several ways to do the job and I don't think there is any one "right" way. The way described here is just one of the ways. Over the three days, I made a very amateur video of how the job was done and will loan it to any interested member.

Be very aware, going this deep into the suspension requires realignment of the rear-end. Tech Tip 95-32 tells how to know where it is at the beginning.

The job involves:

- 1) reading and UNDERSTANDING Ryerson Ultra manual Pages 9-39 and 9-47 through 9-57
- 2) determining the camber and rear hub alignment
- 3) removing trailing arms
- 4) strengthening trailing arms
- 5) replacing turnbuckles
- 6) strengthening triangular section where turnbuckles were removed
- 7) adding shock absorber bracket to back of trailing arm
- 8) replacing inner and outer pivot bushings
- 9) installing trailing arms
- 10) reinstalling and realigning rear hubs

All of the pieces of 1/8th inch steel plate used to do this job were cut from a piece 6 X 48 inches. A hand-held power saber saw with a steel cutting blade was used to make all the cuts.

The steel to replace the turnbuckles came from a length of 7/8ths inch mild steel machinery shaft, 60 inches long. I would have preferred 4130 steel shaft, but it was not available in our area.

Camber was checked with a builder's pendulum protractor. First on the edge of the vertical trailing arm mount to determine the coach body inclination. Then at the wheel hub. On #486, the hubs, checked on both sides, were 1° negative relative to the coach body. After installation, the camber was reset to 1° positive, so over time, as the bushings wear, I expect the camber to go toward zero.

Pulling the trailing arms required the removal of the drive shafts, rear brake lines, rear hubs, parking brake cables, shock absorbers, springs, inner and outer cam bolts. These cam bolts are not identical. Ultra modified the inner cam bolt by grinding a longer flat on the bolt shank because the inner bushing is shorter. Also, be sure to count the number of washers used as fillers on either side of both bushings.

TECH TIP NO. 95-33 SUBJECT Turnbuckle Surgery Continued Page 2 UV MANUAL SECTION 13 PAGE 13-23 AUTHOR Norm Helmkay #486

Before working on the trailing arms, the inner and outer bushings were removed and new ones ordered. The inner bushing (GM p/n 625708 or Clark C1665A) is the same as used in the front "A" arms. The outer bushing is GM p/n 3880422 or Clark p/n C2051.

Save the center sleeve from the big outer bushing. On regular Corvairs, the trailing pivot bolt is 9/16 inch. Ultra used a 1/2 inch cam bolt with and a center sleeve. It is like the center of an "A" arm bushing with serrated edges and half inch bore. When the outer bushing is pulled, notice the four places close to the flange where the bumps were ground off (see Tech Tip 95-31).

The trailing arm cross section looks like a top hat (see Figure 1). To get the shape for a reinforcement piece, a cardboard template was cut for the open side of the trailing arm. The shape was drawn on a piece of 1/8th" steel plate. This piece was bent to match the trailing arm open side, then welded in place all around the trailing arm. Make sure the hole for the big bushing end has extra clearance for installing the new bushing. In the pattern, the hole looks like a long oval.

Turnbuckle threads are cut from 7/8" steel shaft stock. Steel tubes and the turnbuckles were used to make the triangular braces from the trailing arm inward to the inner pivot point (see Page 9-51, drawings DWG:9-CI & 9-CJ). The unthreaded part of the 7/8" steel stock was machined down .030" so it would fit inside the tubes.

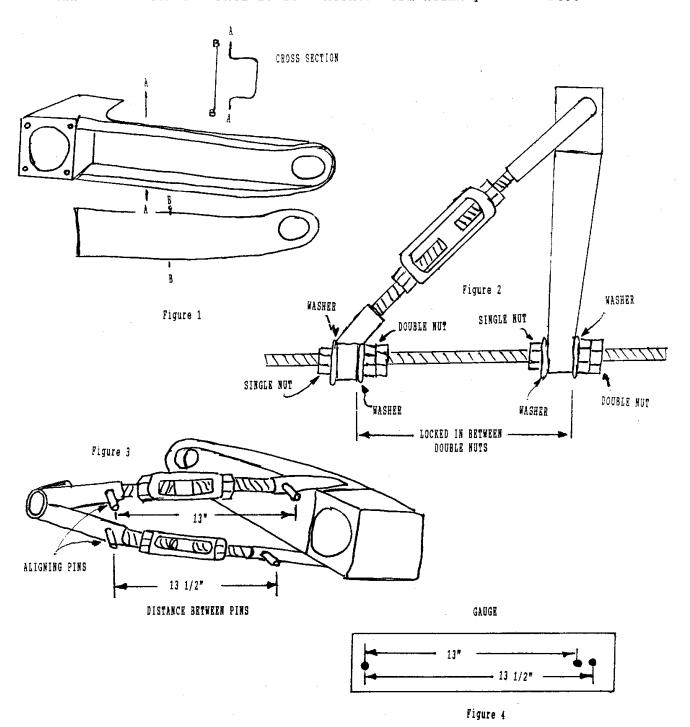
- (a) How far apart are the outside and inside pivot points.
- (b) How long are the upper and lower turnbuckle arms.

To maintain the (a) distance I used a 24" piece of 3/4" threaded rod, six 3/4" nuts and four washers. I made two temporary bushings to center the threaded rod in the inner and outer openings. This rod was installed between the two pivot points. On one side of each pivot point I used double nuts to lock the distance between the two pivots (see Figure 2).

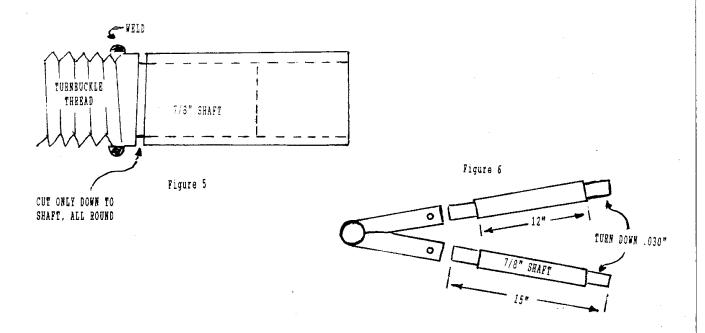
After the pivot point distance was secure (on #486 it was 18.5"), I drilled an 1/8" alignment hole right through each of the tubes just behind where the turnbuckle threads were welded (see Figure 3). These holes are measuring points, to gauge how long each leg of the triangle will be. They need to be carefully drilled an exact distance apart (b).

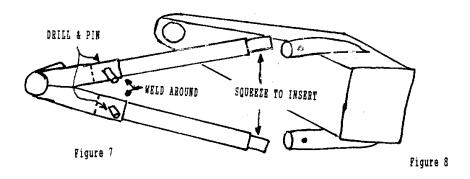
In the case of #486, the two upper tube holes were drilled 13" apart and the two lower tube holes 13.5" apart. Drill the holes in a spot where a flat gauge can be easily fitted over locating pins inserted in these holes. The gauge (see Figure 4) was made from 1/4" x 1" flat bar stock about 15" long. An 1/8" hole was drilled in one end and two holes were drilled in the other end at the 13" and 13.5" marks.

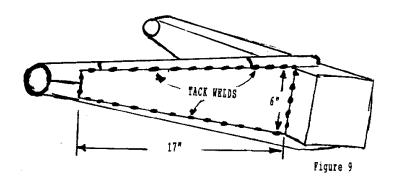
The turnbuckles can now come out. Cut around the tubing just deep enough to free the threaded shaft (see Figure 5). When Ultra machined the 7/8" shaft to fit into the tubing, they made it a tight fit. Over time, in most cases, these ends have rusted in. After the cut is made through the tube at each end of a turnbuckle, the turnbuckle and locknuts can used to turn the shaft back and forth to free-up the piece left inside the tube.



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Next, cut two lengths of 7/8" shaft to replace the turnbuckles. Notice the shaft slides inside the tube about 1.5 inches long (see Figure 6). The distance between the cut ends of the tubes is around 12 inches. Each of the shafts will be about 15" long and both ends of each shaft has to be machined slightly (about .030) to fit inside the tube.

Push the machined ends of two shafts in the tubes at the inner end (see Figure 7) and using the holes shown in Figure 3 as guides, drill 1/8" holes right through. Use the shank end of two 1/8" drill bits as pins to keep the shafts in place. The other two ends of the shafts may be slightly wider than the distance between the tubes at the trailing arm end. To get the two shafts into their tubing holes, squeeze the shafts together a bit by hand (see Figure 8).

Tap on the inner end slightly, enough so the shafts go into the tubes past the two previously drilled (Figure 3) alignment holes. Hook the alignment gauge over the (drill bit) pin at the inner end and tap until the alignment hole in the tube and the hole at the outer end of the gauge match. Clamp the shaft and tube together and drill through the shaft. Push a third (drill bit) pin through the hole to hold the shaft in place.

Aligning the fourth hole is the hardest, as the whole trailing arm is now much stiffer. Using the appropriate gauge holes, tap in or out until the gauge hole and tube hole are aligned, clamp the shaft and drill the last 1/8" hole. Insert the last (drill bit) alignment pin.

With all four (drill bit) alignment pins in place and the 3/4" threaded rod tightened to preserve the pivot alignment, tack-weld the four shafts to maintain the position. After tack-welding, pull the four (drill bit) pins and weld all around the end of the tubes to secure the shafts.

I believe for all normal purposes, the whole trailing arm is stronger now than before, but I decided to add a piece of steel plate covering the triangle area (see Figure 9) for good measure. The 1/8" plate goes from the trailing arm to the inner pivot. The reinforcement is tack-welded every inch around its edge.

You might also review Tech Tip 86-32 by Dave Peterson as reprinted in the Tech Tip booklet (page 115) published by UVMCC in February 1992.

Figure 26, from Tip 86-32 shown below, is an extra tube brace going from the trailing arm over to the inner pivot. Dave says the change began in in mid-1966, but I've only seen it on a few coaches. It was not factory installed on #356 or #486.

DWG: 9-CB

Figure 26

MODIFICATION: Per Dave Peterson 10/86

\*"WELD IN PLACE. This tube should be added. It can be added without removing the "A" frame."

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The Dometic 3 cubic foot refrigerator that fits in the Ultra Van is now only available by special order. As a result, it is very expensive. In the spring of 1995, at Camping World the price was \$805.

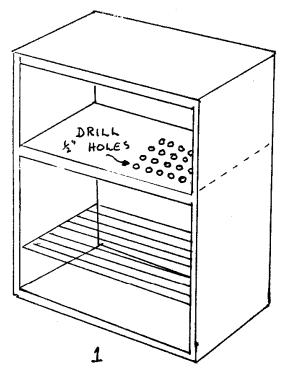
Later 3 cu.ft. models like RM361, have a freezer compartment across the top. In this type, the freezer compartment is lined with aluminum and all the cooling is transmitted into the freezer compartment through two bolts on the back wall. For best efficiency, make sure these are tight.

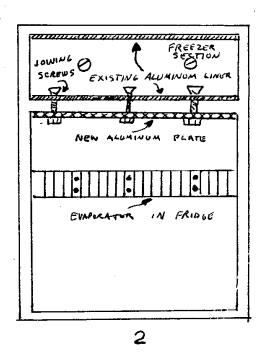
Similarly, in the lower refrigerator compartment, at the top rear, there is a finned aluminum radiator, held to the back wall with six screws. Cold is transmitted from the evaporator into the refrigerator section through these screws, so make sure they are tight.

If the freezer keeps ice cream hard, but the bottom section is not as cold as you would like, some of the cold from the freezer can be moved to the bottom one of two ways.

First, drill about 20 holes (1/2" to 3/4") from the bottom up to the top. They should be drilled at one side so they can be covered or uncovered as needed. Uncovered, the cold air drops from the freezer through the holes, into the bottom.

The second method is more permanent. Cut a piece of .060 aluminum about 7 x 17" and attach it to the top of the refrigerator section with six flat head aluminum bolts and nuts. The cold is transmitted from the aluminum lining of the freezer compartment, through the bolts into the aluminum plate just installed in the refrigerator compartment.





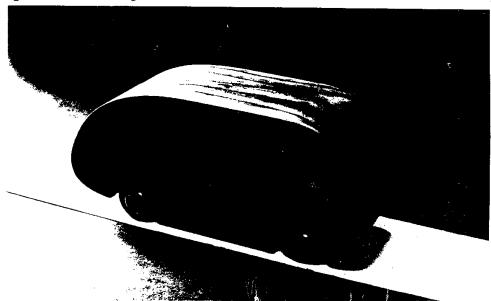
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### PRESENTING THE ULTIMATE ULTRA

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Reace point in next new eletter Well.

## ULTRA POSTSCRIPTS \*\*\*\*

DEAR ULTRA FRIENDS: Just when members have been enjoying the pleasant Summer and Fall seasons, old man WINTER is here or scheduled to soon arrive. For Snow Birds that means thinking about winterizing your coaches, or maybe heading for milder climes. Please continue to send your cards and letters and comments. They help guide what goes into the next Postscripts. Each letter or inquiry is strictly confidential, is appreciated and answered in person or anonymously in the next club mailing. Thanks to all who call or write. This winter issue of Postscripts is rated "R". Before readers react unfavorably, the R we refer to stands for "REACTION". Write your reaction to subjects discussed. Sure! The inserted Announcements between each paragraph are taken from actual BULLETINS. As has often been said, a laugh a day helps keep the doctor away. I've kept mine too busy of late.

Church Bulletin: 'This being Easter Sunday, we will ask Mrs. Lewis to come forward and lay an egg on the altar."

BBs IN THE CLUB: Americans born at the start of Jan. 1946 (right AFTER the 2nd World War) and for five more years, are generally termed Baby Boomers. Soon they will begin being 50 years old and start to think (or worry) about aging. Brace yourself: One Boomer was asked at a check-out counter if he would like his "Senior Discount". He almost fainted. Did he LOOK that old already? Of course, there are many members of Ultra Club who are Boomers and we accept them with open arms. The club needs new and younger blood to SPARK its ideals and its programs and rallies. All us older boy and girl members, some tempered by the hard times of the Great Depression, have done our best to serve club aims and purposes. The Graying of America is very real. We salute each one of you. How I wish I could be BB YOUNG again.

Church Bulletin: "Those of you who have children and don't know it, we have a nursery downstairs."



HAVE YOU SEEN THEM? Some of the new 1996 car models are absolutely beautiful to behold. Most are more STREAMLINED then ever ... terrific to ride in and to drive. Well, aren't ULTRA VANS streamlined? You bet they are! They were (still are) far ahead of their day in aerodynamic concepts, skin friction reduction AND overall basic styling. That light weight and smooth underbelly are not to be sneezed at either. It all helps the high mileage Ultra Motor Coaches are noted for. Plus...no one has yet beat the sheer PLEASURE of sitting behind that wide windshield on a cruise to the next campsite or an up-

coming rally. Incredible: Long live David Peterson's super-streamlined self-propelled--Home on Wheels. The 1996 automobiles have nothing on it.

Church Bulletin: "For Sale in the Patio, a table by a devout lady member, with mahogany legs."

BATTERY CHARGING: Do "YOUR" batteries need recharging? Rejuvinating? Are you TIRED of the hum-drum of life? Attend the next Ultra Rally: You'll return home all "charged up" ready to meet any and all of the challenges of living. Try it.

TRUTHS I DIDN'T KNOW: According to Federal Medical Records, about 20,000 Americans DIE each year from the common flu. I didn't realize it took that many lives. Once you get it, there is no cure as yet. Rest and plenty of fluids will help, they say. A terrible strain of flu during the winter of 1918 and spring of 1919 KILLED 500,000 healthy Americans. It took my young 30-year-old aunt Wanda that winter. We can only hope that particular flu-type never returns. There are many varieties. The SHOTS given each year help protect people from the current strains of flu only. Records prove the shots save lives.

THE SILVER AWARD: The winning vote for the Newhouse "DISTINGUISHED ACHIEVEMENT" medal, went to Dan Reinhardt this year. Congratulations:

IS EMF TOO HIGH? Southern California
Edison, our giant Los Angeles utility firm,
supplied this CHART -- with comments. The
Electric Magnetic Field (EMF radiation) is
common in every home and factory nationally.
EMF is emitted from the wiring and devices
being operated. A good member called about
this. SCE says that exhaustive testing is
finally underway to determine if EMF increases risk of cancer or other health-type
hazards. Check their graph figures. For
example, if you are close to a florescent
light, the radiation can be high as 4,000 mg.
One foot away, it reduces to 20 mg. A yard
away it getsnear zero. I'm not too concerned. But -- neither were the Romans who used

|    | Magnetic Fields at Home<br>(Measurements are in milifiauss.) |                    |                 |                |
|----|--|--------------------|-----------------|----------------|
|    | MICHES AWAY  | 1.2                | 12              | 39             |
|    | Microwave<br>Oven  | 750<br>to<br>2000  | 40<br>to<br>80  | to #           |
| 0  | Clothes<br>Washer  | 8<br>10<br>400     | 2<br>to<br>30   | 0.1<br>to<br>2 |
| 1  | Electric<br>Range  | 60<br>to<br>2000   | 4<br>to<br>40   | 0.1<br>to<br>1 |
| 1  | Fluorescent<br>Lamp  | 400<br>10<br>4000  | S<br>to<br>20   | 0.1<br>to<br>3 |
| -0 | Hair<br>Dryer  | 60<br>to<br>20,000 | 1<br>10<br>70   | a.t<br>to<br>3 |
|    | Television   | 25<br>to<br>500    | 0.4<br>to<br>20 | 0.1<br>to<br>2 |

lead pipe to bring water to their homes. That is, until they started dying early of lead poisoning. Most paint in the US contained <a href="Lead">lead</a> until only a few years ago. Edison advises certain precautions for people who may be worried --- until proof is available: Shut off your electric blanket before going to sleep. Stay at least (12") one-foot away from a TV or computer screen while in operation. Move electric clocks off bed headboards. Hold your Hairdrier 12" from your head or use it less frequently. We wonder what next will be discovered that might be killing us.

SOME PEOPLE ARE LUCKY: Consider the homeless man walking along a street with only ONE shoe. Someone asked, "OH, you lost a shoe?" The homeless man replied, "NO, I found one."

WHAT IS GOING ON? Some people said they dared not open their doors to trick or treaters this year. The rising crime rate, the falling dollar, the reducing-confidence in Congress, the Federal debt, the merging of failing corporations, the trade deficit, the flight of our factories to third-world-nations, concern most people. In answer to a member's question, let us offer a couple of quotes from experts who study these things...Terry Savage remarks, "I believe that the economy is experiencing a 'once-in-a-generation' bull market. But no tree grows to the sky, and warning signals have appeared." James M. Benham writes, "When it comes to the US economy, I tend to be nervous about something all of the time. If you are not nervous, you haven't been paying attention." Does that answer your question? I'm optimistic.

SOME PEOPLE ARE UNLUCKY: There was a poor man who couldn't afford to buy decent shoes. He felt terrible about his situation. That is, until he met a man in a Wheel Chair who didn't have any feet.

Have a happy Winter. Enjoy the colder Season. Mery Christmas to all.
Your servant,

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