

# WHALES ON WHEELS

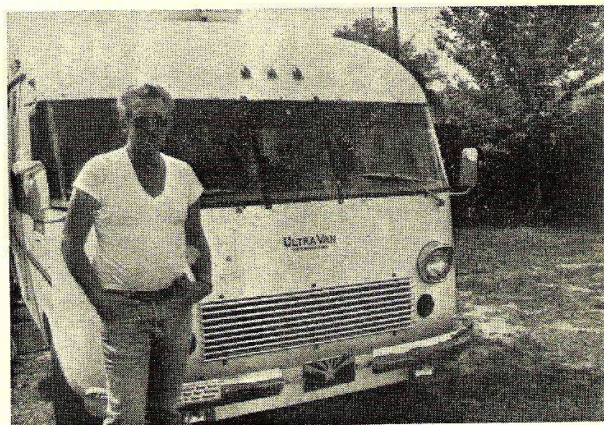
Volume XI **ULTRA VANS** Number 1

## 20 MPG at 70 MPH with Ultra Van

Howard Boso's #453 with a Buick engine

by W. Christy Barden

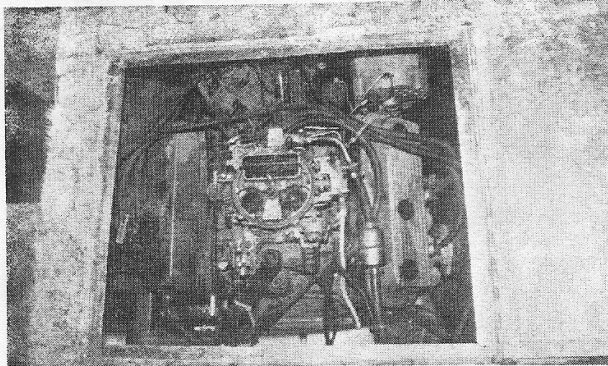
**H**oward Boso #453 is no longer Corvair powered. It's Buick powered! He installed a 1986 3.8 liter (231 cubic inches) V-6 Buick engine. That was the first year for the roller cam. This is the one Buick used up front, as a transverse mounted front wheel drive. He installed the engine in the rear, using a special built motor mount cradle. It sits sideways and used the Buick transaxle. The rear axle ratio is 3.41:1 which is the lowest Buick makes. The automatic transmission is a 3 speed with a lock up (which acts like a 4th). C.V. Joints were used at the half shafts to transmit the power to the rear wheels. The rear wheels were moved back a few inches because the C.V. Joints had to bend to far forward to the rear wheels. The rear hubs are 1980 Buick Riveria (like the Olds Toronado) with disc brakes. The rear tires are 205 - 70 - 14 Michelin Truck tires made for the smaller Winnabego motorhome. They have a load



Howard Boso and Ultra Van #453

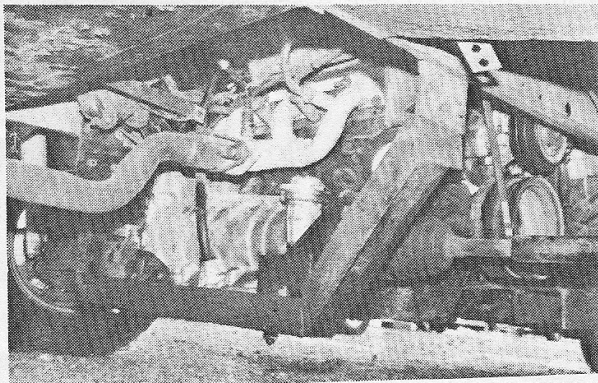


limit of 2270 pounds per tire. The back bed area was modified like the later V-8's Ultra Vans. The rear step (near the engine on the inside) was removed and brought out about a foot. This allows installing the engine as far forward as possible, which in turn allows only having to move the rear wheels a few inches rearward. The radiator



*The engine from the top with old carburator*

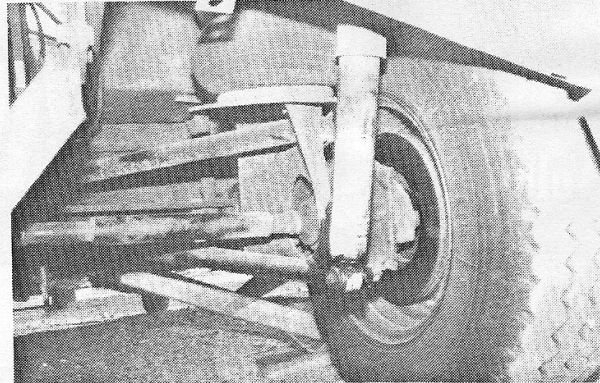
is up front. A special constructed five core type nine inches tall and forth inches wide. It has baffles in it which require the water to run through three different sections of the radiator. It also has a back up electric fan for traffic. Boso states that many foreign cars use this system to get away with smaller radiators. He claims the temperature run about 140 degrees. He had trouble using a thermostat. With a 180 degree thermostat, it would open at 180 degrees. When the water from the radiator was only 140 degrees when it returned to the thermostat causing it too closed. Then the engine block water temperature would rise to 250 degree before the 180 degree thermostat would open again. This would go on back and forth until it would settle down at 180 degrees. So he took the thermostat out and used a one half inch reducer in its place. That's why is runs at 140 degrees, which he agrees



*The engine from the bottom looking foward*

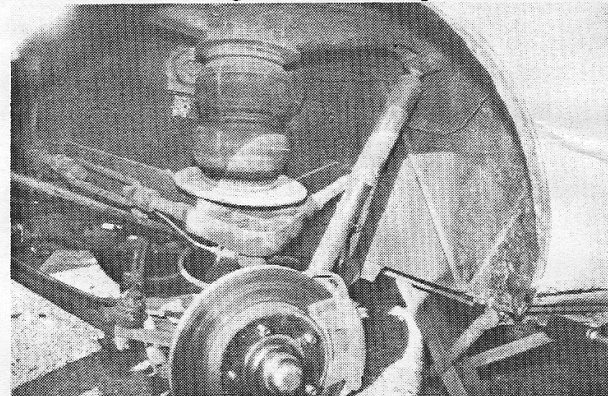
is too cold. He plans to put louvers up front to restrict air flow through the radiator as the truckers do. The transmission cooler is located just behind the water radiator.

The engine parts were coated with a Polymer and ceramic coatings (see below). This also helps keep the engine temperature down and the mileage up. He coated the exhaust manifold in and out; the heads; guides and valve stems, piston's top and sides, oil pump and rear housing. He used the Bosh fuel injection system out of a 280Z. He sets the timing about 12 - 14 degrees using unleaded



*Rear wheel showing air bags and axle*

regular gas. With the old Holly 4 barrel Economizer carburetor his mileage was about 17.8 at 60 M.P.H. At 75 - 70 M.P.H. he got 15.5 M.P.G. Now with the recent installation of fuel injection he gets about 20 M.P.G. at 65 - 70 M.P.H. He attributes much of this to the Polymer and ceramic coatings in the engine. It runs leaner because no fuel is used for cooling of the heads and pistons, and there



*Front wheel disc brakes with air bags and Corvair FC steering*

is less parasitic drag. This may account for his lower water temperature as well. Boso installed a similar system for Arnold Steenburg #507 without the engine

coatings and Arnold gets 14.5 M.P.G. at 65-70 M.P.H. The front wheel hubs are stock Chevy II with adapted disc brakes from a 1978-80 Cadillac. He uses the front wheels for the parking brake as well. That way he doesn't have to run a cable to the rear. The front suspension has Firestone Air bag and the rear has Goodyear air bags (their bigger). With this suspension he says the only thing that pushes him around is a semi truck with a flat front. He goes down the road weighing about 6400 pounds His steering mechanism is out of a Corvair Forward Control truck, no bell crank, or heim joints.

### Polymer and Ceramic Coatings

PROTEK coatings differ from most other coatings in that they're designed for specific types of friction and mechanical applications. There are different types of frictions when parts wear against each other, such as the parasitic drag induced by friction which robs an engine of its true horsepower potential. Friction on timing chains and sprockets is a different kind of friction from friction on valve and valve guides. They apply the coating according to the type of part and the frictions generated it's use. Piston skirts coatings, for example, are different when applied to not-racing piston than they are when applied to racing engines designed to function consistently over 6000 Rpm.

PROTEK coatings are blended from a variety of materials for specific requirements. Some for the coatings are "non-wetting," meaning they will shed oils, others are "wetting agents," in that they attract oil. These qualities help determine which materials are to be used, how and where they will afford the most benefit. Generally, the coatings provide a barrier between two metal surfaces. Sometimes both surfaces are coated, sometimes just one surface. They must determine the Rockwell hardness of the material to be coated, the type of friction, type of oiling and the environment it will be exposed to. This determines which surfaces to coat and which coating

material to use.

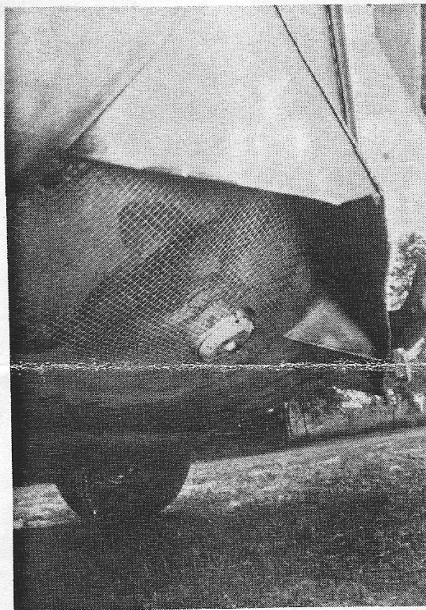
Prior to coating, all material is thoroughly cleaned, prepared by chemical and mechanical means so that the metal will accept the impregnation process. The coating is applied as a composite material and baked into the metal. The thickness varies from .0002" to .0007" increased from the original dimension but does not include the penetration into the metal, which varies from .001" to .015", depending on the base material. Their tolerances for finished parts are (+-) .0001". The only critical dimension that must be compensated for are the rod and main bearing clearances and the pin bore and

wrist pin bushing to pin where they need .0007" to .001" for the coating over-build.

There are many advantages to coated versus uncoated parts. Reduced friction and wear increases the life of the coated parts up to three times the normal life of uncoated parts. Advantages include oil temperature reduction of 25F to 35F; increased power directly related to the decrease in parasitic drag on most engines; a two and one half to five and one half percentage increase in both torque and horse power and the power is made easier at lower Rpm. Coatings have become the standard for use on highly stressed racing engines and on some aircraft engines where reliability is a must.

Another entirely different type of coating is the heat shield and ceramic coating for combustion chambers and exhaust systems. The purpose of this family of coatings is to contain the heat where it will do the most good. In most internal combustion engines, over half of the fuel is used for cooling the combustion space. This is the only feasible way to make engines function using current materials, because average ignition temperatures are 1800F and aluminum becomes plastic above 480F. The only way to keep the piston crown from melting is to wash it between ignition cycles with cool fuel!

The ceramic material used by Proto Tech on piston crowns, valve heads and combustion chambers reject's

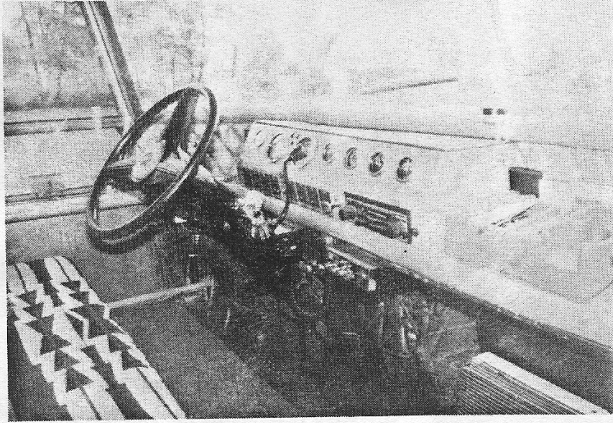


*Electric fans cool the radiator up front*

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heat and decreases the amount of fuel needed to cool these surfaces. These coatings allow the user to increase the compression by 1.5:1 without risk of detonation, even with 90 octane unleaded fuel. On racing applications the compression ratio is increased from 12.5:1 to 14:1. When these ceramic coatings are applied to the entire combustion area, the fuel supply is reduced by a minimum of 20% and up to 40%, depending upon the efficiency of the engine. Coated combustion chambers reduce the exhaust gas temperature by an average of 200/250 degrees,



*Boso's driving compartment*

as there is less unburned fuel getting ignited in the exhaust passages. Ceramic coating also lowers the water temperature of the engine and lowers the oil temperature by shielding the oil from the hot aluminum pistons. Many engine builders now specify coated piston crowns when extremely long connecting rods are used and the rod end only clears the bottom of the piston crown by a few thousandths of an inch— or when piston crown thickness is .200" or less. The ceramic and heat shields also enhance the exhaust system by keeping the heat in longer to reduce back pressure and lower the under-the-hood temperatures. Another benefit is the increased life of the exhaust system through reducing corrosion and oxidation. Coating exhaust systems and turbo scrolls increases turbo charger efficiency by getting more temperature to the exhaust turbine, thereby increasing its speed and boost. Coated headers look good and can be color coated. For more information on this coating process contact: Prototype Technology of New Mexico, 450 Lance Drive, P.O. Box 2965, Silver City, New Mexico 88062. (505) 538-5158.



*The Franz family. L.to R., Bruce, Rick, Joaquin, Bob and Roberta*

## CHRISTMAS IN MEXICO

by Robert Franz

After a wonderful vacation with the family we were on our way home. The road in this area had a series of abrupt dips for flash flood drainage. Coming out of a dip at 10-12 mph, a transaxle dropped free from the differential and banged the pavement several times. It seemed like a devastating breakdown. One of the curved straps anchoring the "U" joint to the yoke was gone as well as the two 3/8" bolts. The "U" joint was smashed. Bruce took his van and two wheeled jet ski trailer and backtracked for miles with Rick and Joaquin riding on the rear searching for the missing strap. Meanwhile, Roberta brought out a table, newspapers, and rags and prepared a work bench. Bob was removing the transaxle and searching the body for that size bolt. Viola! The same bolts were found holding a plate to the frame where a shock absorber was originally installed but later moved. At this time Bruce returned and Rick had spotted the strap miles back! So a new "U" joint was lubed and installed and the transaxle bolted back in place by Bob and Joaquin, who, learning the use of ratchet socket tool, found how easy it was to do a rata-tap-tap- on Bob's head. On to San Felipe with no further problems. I was lucky to have had the new "U" joint, maybe I'll carry a few extra bolts as well.



# *RALLY TO ALASKA*

We will be meeting at Bill and Dee Keith's residence in North Idaho. Please drop them a card to let them know when you should be expected and how many. They only have room for about 15 to 20 Ultra Vans. Bill will be monitoring C.B. channel 15 at all times. If you have a problem get on the C.B. and ask him for help or call. His address is: Rt. 3 Box 350, Rathdurm, ID 83858. (607) 687-0786.

Directions on how to get there: Arriving from the the East:

Go north on any Highway until you reach I-90 Highway. Turn to the west (toward Seattle) follow I-90 to Coeur d' Alene, Idaho. Continue west to exit #7 (Ratldrum). Take exit #7 off ramp to stop sign then turn left (north). Go 7 miles (watch milage markers). About 200 feet past milage marker (A corner stop with small gas station) turn right and go one short block. Two story pink and white house yellow numbers #511 on porch. Park anywhere.

Arriving from the West:

Go north on any highway to I-90 then turn east (toward Missoula, Montana). Follow I-90 to Spokane, Wash. Continue east to Post Falls, Idaho. Continue on to Exit #7. Take exit #7 to stop sign, turn left (north). Use same directions as per previous directions.

***LEAVE MAY 25. UP TO ALASKA, RETURN TO DAWSON CREEK, BRITISH COLUMBIA***

***MAY 25 START AT COEUR D' ALENE - JUNE 30 FINISH AT DAWSON CREEK***

***1992***

DAWSON CREEK is the official end of the rally. Mileage to Vancouver B.C. from here is 755 miles, to Great Falls MT. 931 miles.

As you can see the schedule is easy and will give time to see the sights. There is also room for flexibility. If you plan to take the Alaska Marine Highway (Ferry) phone 1-800-642-0066 and make your reservations. You could take the June 27 or 28th Ferry.

The trip is about 5,000 miles. If you get 10 M.P.G. and assume an average price of \$2.00 a gallon for gas, the fuel cost will be about \$1,000.00. Food for 6 weeks could be \$850.00. Camping fees, entrance fees, tolls, general spending money, repairs etc. could be about \$500.00.. A cost of \$2,500.00 for the trip would not be unreasonable. Please plan accordingly.

So get out those maps, the Auto Club has good ones, and look over the route.

For more information contact: Jim Craig, 7011 Sunny Vista Road, Joshua Tree, CA 92252. (619) 366-9104. Send a S.A.S.E. legal size. Rally Master will be W. Christy Barden. He is on the road this year in Ultra 603. He takes messages at home (303) 530-1288 or in Los Angeles (818) 786-7815.

If you plan to attend the rally you **MUST BE A CORSA MEMBER**. There will be applications at the rally sight to assist those who are not yet members.



## MAY 20 - JUNE 30

### GROUP ULTRA VAN

# Itinerary for Rendezvous '92

Total Miles	Miles	State/	City	Province	Days	Arrive/Depart	Day of Week
Miles	Between						
	Stops						
0	0		Coeur 'd Alene	ID	5	5/20 - 5/25	W-T-F-S-S-
190	190		Creston	B.C.	1	5/25 - 5/26	M
364	174		Lake Louise	Alb.	1	5/26 - 5/27	T
477	113		Calgary	Alb.	1	5/27 - 5/28	W
658	181		Edmonton	Alb.	2	5/28 - 5/30	T-F
873	215		Valley View	Alb.	1	5/30 - 5/31	S
947	74		Grand Prairie	Alb.	1	5/31 - 6/01	S
1025	78		Dawson Creek	B.C.	1	6/01 - 6/02	M
<i>This is the start of the Alcan Highway.</i>							
1301	276		Fort Nelson	B.C.	1	6/02 - 6/03	T
1467	166		Muncho Lake	B.C.	1	6/03 - 6/04	W
1637	170		Watson Lake	Y.T.	1	6/04 - 6/05	T
1796	159		Teslin	Y.T.	1	6/05 - 6/06	F
1916	120		Whitehorse	Y.T.	1	6/06 - 6/07	S
2077	161		Destruction Bay	Y.T.	1	6/07 - 6/08	S
2276	199		Delta Junction	Alka	1	6/08 - 6/09	M
2474	198		Fairbanks	Alka	3	6/09 - 6/12	T-W-T
2602	128		Denali Nat'l Pk	Alka	2	6/12 - 6/14	F-S
<i>(See Mt. McKinley at 20,320 feet above sea level)</i>							
2841	239		Anchorage	Alka	3	6/14 - 6/17	S-M-T
2968	127		Seward	Alka	2	6/17 - 6/19	W-T
3098	130		Palmer	Alka	2	6/19 - 6/21	F-S
3298	200		Gulkawa Jct.	Alka	1	6/21 - 6/22	S
3422	124		Tok	Alka	1	6/22 - 6/23	M
3608	186		Dawson City	Y.T.	1	6/23 - 6/24	T
3782	174		Minto	Y.T.	1	6/24 - 6/25	W
3940	158		Whitehorse	Y.T.	1	6/25 - 6/26	T
<i>(From here those that are returning by Ferry will head south, to Haines or Skagway)</i>							
4216	276		Watson Lake	Y.T.	1	6/26 - 6/27	F
<i>(From here some will want to head south on Highway 37 to Prince Rupert. 586 Miles)</i>							
4385	169		Nuncho Lake	B.C.	1	6/27 - 6/28	S
4551	166		Fort Nelson	B.C.	1	6/28 - 6/29	S
4827	276		Dawson Creek	B.C.	1	6/29	M



# DEATH VALLEY REVISITED

or "We Survived Death Vall  
By Jim Craig

Members of Group Ultra Van recently enjoyed a week-long rally in Death Valley California. It was hosted by the Ultra Van Motor Coach Club, Inc. Eighteen Ultra Vans were present in addition to several other types of



*ULTRA VANS parked in the Death Valley desert*  
RV's. The rally lasted seven days and many activities were enjoyed by all. The first day was spent on tour to the north end of the valley to visit Scotty's Castle. The guide at the Castle was in dress of the period (1920's style) and other rangers dressed in period clothes acting as if they were visitors to Scotty's. An example was a film director that was caught in a time warp and was telling us about his planned trip to Germany to film some of Hitler's parades and rallies. Christy and several others had fun trying to talk him out of his time warp, but to no



*All of the attendees gather for a group photo*



*Rally Master Jim Craig starts time for the Flapjack mixers.*



*Everybody is watching Warren Suckow gobble down his hastily prepared pancake.*



*The flapjack cookoff winners. L. to R. Betty Reinhardt, Leonard Tekoot 1st place, Edna Steenberg, Warren Suckow 2nd place, Marline Craig, Mike Reinhardt, Esther Snyder 3ed place.*



avail. Scotty's is run by the National Park Service and by being a "living" Museum they get more money from the service to run the place.

After leaving Scotty's we went to Ubehebe Crater to snap a few photos and view the moonlike landscape. Before returning to camp we took a walk on the sand dunes at sunset. What a beautiful experience. We drove 128 miles round trip that day.

I might mention that when visiting the Valley and you want to see the sights here, plan on driving many miles. Each trip is worth the extra expense of the fuel.

The men and women both enjoyed their respective tech and craft periods.

Each morning coffee, tea and snacks were enjoyed by all during an hour long time of visiting and story telling.

On the third day a great "Pot Luck" dinner was prepared by the ladies and everyone ate until we couldn't eat anymore. Then topped it all off with many different deserts.

The fourth day was a tour to Dante's view; Badwater; Devils Golf Course; the Salt Flats and Furnace Creek Inn. Dante's View was a 25 mile trip from camp with the last quarter mile climb a 14 percent grade. The V/8 Ultra with 6 persons aboard climbed it just fine, under full throttle.

The view of Death Valley basin from the overlook is the most breathtaking and gorgeous any visitor will see in the area. The overlook is at 5422 feet above the valley floor. A view that most will not forget.

A walking tour was made at the Furnace Creek Inn. This is a very upscale lodging hotel and very rustic with a western architecture decor. On entering the hotel from the lower parking area you can proceed through a long passageway below the hotel that exits you out in a real oasis with tall shapely palm trees, green grass and a clear water pool. A beautiful swimming pool was nearby with a bar and hostess serving up your desired refreshments. This was a treat to see but it could empty your wallet to have stayed there overnight. \$175 to \$350 a day per person, including 2 meals

The hosts had a raffle drawing the next morning during coffee time and gave away some really nice gifts. They included several gift certificates from Clarks Corvair Parts and Corvair Underground. Later that day a Flapjack cooking and eating contest was held. It was a real riot to watch the ladies mix and cook the flapjack and rush it out the men or their team mate and have them eat it as fast as

they could. The winning flapjack maker was Betty Reinhardt and her team mate Leonard Tekaat the fastest eater. Winning time was just over 5 minutes. Frist, Second and Third place trophies were presented. The flapjack cookoff was a new rally event for the club and it was a lot of fun. Perhaps future rally hosts will try it again.

The next day being Sunday a causal day was in order. Church services and a silent auction were the events of the day. Many items exchanged hands at the auction and the sellers and buyers were a happy bunch.

Some Ultras departed in the early morning and the last of the group left the next day.

We all survived Death Valley, a place of life and beauty. Good bye Death Valley till next time.

## FROM THE EDITOR

*You now have the information on the Alaska Rally. It should be a simple trip. Please drop a card or phone Bill Keith if you plan to come to Coeur d' Alene. You need not have to travel to Alaska to join us in Bill's place. The February issue of Trailer Life has a good article on "The Great Road To Alaska.*

*I spent most of February rebuilding a Corvair engine. My 1965 4 door I keep in LA.. gave out in Frseno, California. I had 50,000 miles on the last rebuild. It had no power and no compression (they seem to go together). I re-ringed the pistons and put it all back together. Still the same problem. I took off the heads and did a super valve job. Still the same problem. But it ran good enough to get to Los Angeles. I took it all down this time and found the cam gear had slipped on the cam shaft. It had about 35 degree "free travel". The thrust washer came out in about 10 pieces. I put it back together with new bearings and now is runs good. The third time is the charm. What better way to spend 3 weeks. Some CORSA people in the Fresno area I have to thank: Bud Hicks for selling parts, Leroy Hammond for his moral support and Digger Nishimoto for his expertise and help. He dropped everything and drove into Fresno ( 1 hour one way) to bring me parts. What a guy! My guess is the problem started when we press on the Cam gear 15 years ago and didn't heat it before we pressed it on. A word to the wise.*



It was learned that Glen Moen # 413 broke a crankshaft on the way to the Death Valley Rally. He changed the rod bearings in Baker California hoping it was a rod problem and started to follow the group back to Jim Craigs. He didn't make it. Jim towed him to his place with his V-8 powered #549. This also happened to Jean McMasters #330, as you read in our last newsletter. Some Ultra's are using a solid pulley on the back of the engine. the reason is that don't separate like the Harmonic Balancers do. But the Harmonic Balancer was used because the 110, 140 and late turbo engines sets us a harmonic vibration about 4,400 RPM because of the longer crankshaft of the 164 cubic inch engine. The Harmonic Balancer was the fix for this problem, so none of us should have a solid pulley on our Ultra's.

I just returned from Roy Muranaka's #604. This is the stable mate to my 603. Both were built side by side in Oakland California in 1973-74. These side mounted V-8's are just a little different. Roy just replaced the Olds engine in his. He was having heating problems with the old one. We compared both of our engine temperatures at idle and his was much warmer. He felt that corrosion in the engine was causing the problem. I am impressed with Roy's knowledge and energy. He worked with his family farming business taking care of all of the mechanized equipment. He has owned over 15 motor homes at different times. We'll do a feature on him in the future.

## UP-COMING RALLIES

**March 25 - 30, 1992. Annual Florida Rally.** Knight Trail Park, Laurel, Florida. Fee \$6.00 per night includes electricity and water. Park Phone (813) 488-0893, Emergency phone: (813) 484-8253

**April 21 - 25, 1992. The Arizona Copper Triangle Rally.** This will be a progressive rally (progressive dinner) covering 18 to 102 miles per day. Start at the Hope Baptist Church, 4842 N. 51st Ave. Phoenix. Cost \$20.00 Includes 3 evening meals. Call to make reservations for meals. Contact: Dan and Betty Reinhardt, 5201 W. Camelback Rd. A255, Phoenix, AZ 85031. (602) 846-6920

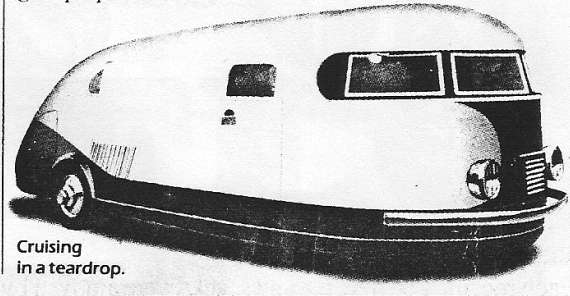
**May 20 - 25, 1992. Coeur d'Alene, Idaho.** Near the lake, fishing, boating, golf, and shopping centers. Bill and Dee Kieth, Rt. 3 Box 350, Rathdrum ID 83858. (208) 687-0786. All are welcome. Bill says let him know if you are coming, a card or a phone call. He has only room for 15 or 20 Ultra Vans. This will also be the starting point for the Rally to Alaska. Directions are printed in "Alaska Rally" in this issue.

## 50 YEARS AGO: May 1938

### Oddball Auto

"Teardrop" automobiles were forerunners of the VW Bus, although they never achieved widespread popularity. A rear-mounted engine propelled the 22-

ft. vehicle up to 86 mph, averaging 17 mpg. Inside, the car had 6-ft. 4-in. headroom. A periscope allowed the driver unobstructed side and rear views.



Cruising in a teardrop.

**May 25 - June 30 1992. Rally to Alaska.** Rendezvous '92. We'll meet in Coeur d'Alene, Idaho. From there we'll tour up to Fairbanks, Alaska. Passing through Alberta, British Columbia, The Yukon and up to Fairbanks. This is the 50th anniversary of the Alcan highway, 1941 - 1992. Big celebrations are planned by all participants along the way. Mark your calendar. For further information contact: Jim Craig, 7011 Sunny Vista Road, Joshua Tree, CA 92252. (619) 366-9104. Enclose self-addressed stamped envelope (legal size).

**July 12 - 18, 1992. Summer in the Mountains.** Smoke Run PA. At the home of Gordon & Ruth Harvey in the oak tree grove. Primitive site. Contact: The Harveys, Box 53, Smoke Run PA 16681. (814) 378-5363.

**September 23 - 30, 1992. National U.V.M.C.C., Inc. Rally.** Admiralty Park, San Antonio, Texas. This is a large park with many amenities. See the Alamo, the famous river walk and more. Fee will be about \$15.00 per night. Contact: Pat Fitzgerald, 1079 Bay Shore Drive, Englewood FL 34223. (813) 474-6468.

**January 1993. Las Vegas Rally.** Hosts: John and Claire Hoffman, 3890 S. Nellis #286, Las Vegas NV 89121.

**April 1993. Sadona Airzona (?).**

**September 1993. U.V.M.C.C. National Rally. Colorado.**



Jim Craig at home





# GROUP ULTRA VAN

5537 PIONEER ROAD  
BOULDER, COLORADO 80301



FIRST CLASS MAIL



Walt Davison #366 sends this photo of his Whale with another whale. Taken in Hoquiam Wash. on the rear wall of the Swansons Grocery. He also sent quite a wordy article, which we did not have space to print, on the places he visited on his trip last year around the Western US.

*WHALES ON WHEELS* IS A QUARTERLY PUBLICATION OF GROUP ULTRA VAN, A CORSA CHAPTER. IT IS DEDICATED TO THE PRESERVATION AND USE OF THE ULTRA VANS. This 22 foot unique motor home was designed by David Peterson and built in Kansas until 1970. About 360 units were built. Dues are \$4.00 annually, please remit to the Secretary-Treasurer. Submit all technical information to the Editor.

**PRESIDENT**

Jean McMasters #330  
916 Lighthouse Drive  
No. Palm Beach, FL 33408  
(407) 626-0388

**VICE-PRESIDENT**

Jim Bents #446  
6571 Spring Path Ln.  
San Jose, CA 95120  
(408) 997-7438

**SEC.-TREASURER**

Louis Griggs #334  
626 Brookfield Ave.  
Cumberland, MD 21502  
(301) 722-2991

**EDITOR**

W. Christy Barden #228,603  
5537 Pioneer Road.  
Boulder, CO 80301  
(818) 786-7815

**DIRECTORS**

**Eastern**

Pete Kehloer #465  
27446 Beacon Sq.  
Farmington Hills, MI 49018  
(313) 478-0906

**Western**

Art Eller #364  
3873 Shannon Rd.  
L. A., CA 90027  
(213) 660-3880

Corvair Society of America (CORSA)

P.O. Box 550, Midlothian, Illinois 60445-0550  
(708) 339-6241