BUS CONVERSIONS MAGAZINE | December 2010

$6.00 Canada | $5.00 US
Volume 19| Number 12

BCM

Cover Story: "JOURNEY ONE: Dreams Do Come True"
General Exterior Inspection • Heating a Bus • Shore Power Outlets
Building a Bed Slide Out • Fire Safety • Bus Life: Misadventures...
Travel: Land of Fire, Yellowstone

Merry Christmas & Happy New Year

MIKE SULLIVAN

I don't know about you but I am really stunned that this year is already winding out. I can't help but conclude that somebody has been tinkering with the max speed setting in the governor of this engine called time. But here we are at the end of another year getting ready for Christmas.

For many it was a difficult year and for some it was a heart-breaking year. For those who lost a family member or friend, we give our prayers and condolences. For those who have struggled with finances or other of life's potential hardships, we pray that this coming year will bring you restoration.

For everyone, we wish you a Christmas season that fills you with a sense of joy and surrounds you with those you love. We pray for a new year that brings financial security and stability, good health, happiness, and of course good bussing!

I have great optimism for the bus nut hobby this year. Both on the forum and in magazine subscriptions we have seen many new folks looking for or tackling their first bus conversion. Since this upsurge the online forum has seen massive growth. At the time of this writing it looks almost certain that the forum will pass the milestone of one million page views for the month!

As Jack & Paula Conrad put on the grand finale of 11 years of their Bussin' rallies, it appears that this will be the biggest one yet. Some of that is previous attendees returning to be a part of the finale. But there are also quite a few first time attendees planning to be there. I see that as yet another indicator that our beloved bus hobby is growing even during lean economic times.

So let's all take a pleasant pause for a joyous Christmas and then set ourselves to the endeavor of making it a really great year!

ADVERTISER'SINDEX

Retraction:

In Steve Gaines photo column in the November issue we made an editorial note that erroneously included Eagles in a list of buses that use chassis beam frame construction. In actuality Eagles use a monolithic box frame. However, the observation made in that note is still applicable to Eagles.

PUBLISHED BY
Bus Conversion Enterprises, Inc.
135 Prater Road Rossville, GA 30741-4688
Phone: 863-303-4008 FAX: 877-783-1667
E-mail: info@ busconversions.com

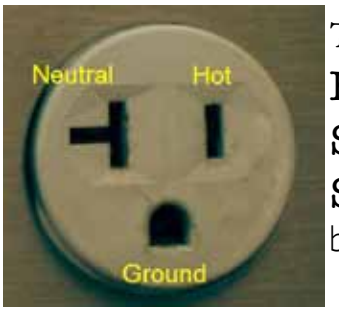
BOARD OF DIRECTORS
Mike Sullivan, President
Chad Laines, Vice President
Phil Lyons, Vice President

EDITOR, ART DIRECTOR
Chad Laines

BBS MODERATORS
Nick Badame
Jack Conrad
K.J. "Frank" Franklin
Paul Lawry
Phil Lyons
Mike Sullivan

CONTRIBUTORS
Wendy Crosby | Sean Welsh
Mike Sulllivan | Ted Boothroyd
Steve Gaines | | Dave Galey
Bryan Larrabee | Sandy Koos | Joe Cannarozzi

Bus Conversions Magazine and Website
Originally Founded in 1991
By Michael Kadletz
Acquired by Bus Conversion Enterprises, Inc.
July 2009



JOURNEY ONE:
Dreams Do Come True

To say that Vivian McGraw has a zest for life may be a bit of an understatement. A colorful and thoroughly lived lifetime has been condensed into her 86 years and she is still going strong.

WENDY CROSBY

By the time most bus full timers and RVers are Vivian's age, they start thinking they are getting too old to drive and travel in their bus. Maybe this story will make them think again! Vivian has just acquired a new (to her) bus and is planning on hitting the road in the very near future. Her story is heartwarming and encouraging, especially for women, who may want to drive the bus to help spell their husband, but are intimidated by the size, complexity and learning curve required.

Vivian fell in love with buses when she was just a young girl and "growin' up poor." Her grandfather, whom she adored, took her under his wing and she helped him in his truck farming operation, where they dug potatoes, grew vegetables, and worked in the greenhouses growing produce to sell at his roadside stand in a small town out in the New Jersey countryside. One day, when she was just ten years old, a bus broke down outside of her house. "I heard the air brakes and was fascinated with them. My grandpa was there and he told me to just get buses out of my head because girls didn't drive them." Of course, right then and there, she set out to prove him wrong, and did she ever!

It took her a very long time, but after driving school buses in the 1960s, she looked for someone to teach her how to drive a "real" bus. She finally realized her girlhood dream and became a bus driver for Lincoln Transit in New Jersey—and not just in some small sleepy town. Her skills were tested in the 1970s and 1980s when the buses were all manual transmissions requiring double clutching and "arm strong" steering. Her routes took her all over New York City, Manhattan, Atlantic City and other congested points on the Eastern seaboard, including the Lincoln Tunnel. Even today, longtime busers try to avoid the nerve wracking obstacles on these routes and the high volume of traffic, the weather and the unpredictable behavior of other drivers. She met all of these challenges with her usual positive outlook and "can-do" attitude.

At first during her commercial career, she said people were a bit uneasy when they saw that the bus driver was a woman but they soon realized that she was just as competent as a male driver and they became comfortable with her

skills. This was in the early 1970s and Viv has never looked back.

Since she grew up poor, and did not see eye to eye with her strict German grandmother, she was couldn't wait to get out of the house and have her own place. Unfortunately, her rush to grow up led to three early and brief marriages. They still lasted nearly seven years, she says, "because that's how long it took to get divorced in those days." All the husbands were in some branch of the military and that constant moving around is when the traveling bug bit her hard. She never forgot about her love of buses and always wanted to have one of her own.

Through the years, her love of travel and camping was manifested in owning over 14 RVs and campers, including a 35 foot trailer that she pulled behind a 1947 Cadillac in the early 1950s. The only problem she had in those early camping days was driving in the mountains. She describes the scene of being on a mountain switchback road in Colorado, eight months pregnant with a five year old daughter in tow. When she got to the top, she was fine, but going back down was another matter—she was terrified! She knew she had to back it up, turn it around and make it back down—and she did. She said she got a lot of "OK" signs from people on that trip who were impressed to see a woman driving a rig like that. Her "can-do" attitude got a real shot in the arm on that adventure and she has capitalized on her skills and good fortune whenever life throws a roadblock in her path.

And there have been many obstacles in the path of life that have severely tested her. One son died when he was only 27. Her husband, Leo, whom she married in 1964 and was married to for 39 years, passed away in 1998 after battling cancer for nine years with many surgeries and heartbreaks along the way. Leo went camping with her sometimes, taking a couple of weeks out of his annual vacation to accompany her to Florida, but she says, "I wish my husband had more interest in camping than he did. He kind of went grudgingly—more to please me— for a week or so of his yearly vacations. He really preferred to stay home and work with his computers. Most of the summer camping that I did in and around New Jersey while we were married was with our kids, my sisters, and my girlfriends, and I had been to Florida many times before Leo and I married in 1964."

After Leo died, her other son, Bobby, died of a massive infection. Vivian became even more determined to get a bus of her own while she was still young enough to drive it and travel to Florida and other spots. This is how Vivian described that time, "I wish I could put into words the way I feel about all this happening."

...grandpa said, "Get buses out of your head because girls don't drive them." It was right then and there that Viv set out to prove him wrong...and did she ever!

Vivian's last time driving the 245.

Vivian's husband Leo playing and singing in 1986. Leo passed away in 1998. They enjoyed 39 years of marriage.

Continued on Pg. 6

"And I tell you—it's been 'Outta Sight,' once I found the bus for me."

Sue and Viv and Denny's.

Her new pride and joy is a 1988 Prevost Le Mirage XL.

"After my son died in 2006, I had to do something to deal with the shock and grief. I never liked driving mountains. New Jersey and New York, where I did most of my commercial bus driving was pretty much all flat land since we're at sea level. I never took my 1998 Dolphin on any trip that could take me into mountains. That meant if I wanted to drive to California, where I figured I could be behind the wheel for a few months straight and try to accept my Bobby being gone forever, I would need another vehicle. He was always the closest of my kids because he always needed me most—not because I loved him any more than the others. My oldest son Gordon had been gone so many years with being in the Military and then dying so young at 27. I'd long since accepted his being gone forever but Bobby was 47 and was my rock after my husband died. He had the White Line Fever too—I guess he got it from me. He was such a good guy and would do anything for anyone. He was my right arm after I lost my husband Leo. I'll miss him desperately the rest of my life."

"I bought a 19 foot 1997 Coach House Class B Van type Motor Home and had some signs made telling people about COPD (Chronic Obstructive Pulmonary Disease), which I had just been diagnosed with. I had them installed on the Coach House. Many people still don't know that when they become really short of breath it might not be just because they did some extra heavy work but really because they had COPD and hadn't yet been diagnosed."

"I drove that Van Motor Home over 11,000 miles in the five months it took me to get to The Slabs in Niland, California and weave my way back through Dallas, Texas and the Louisiana flood and Hurricane Katrina devastation that had happened just months before. When I saw how much others had lost—first hand—I knew I hadn't lost nearly as much as many of them had. It did make it easier to bear up under my own loss. I came home being so glad I loved driving so much."

That's when she started thinking about Her Bus again and as soon as she got back home to the computer, she started going to all the websites again with even stronger renewed determination to find her bus.

The kicker was how hard it was to find the bus she could afford and still be sure was in decent enough condition regardless of it's age. She elaborates, "I know they can make you broke overnight if you aren't pretty well heeled and I'm sure not, but I was so determined to find my bus while I knew I could still drive it."

She had known about the bus she eventually bought for over two years before she could get it, so she looked at several more thinking that one was not to be—he was asking more than she could afford. Don, the seller was also in his own sad situation, he finally knew he had to just let it go in order to hang onto his livelihood, a Peterbilt tractor trailer rig. "He hadn't been able to find work for months and months and was about to lose them both when he called me and told me on the phone that if I could raise enough cash to pay off the bus I could have it! OOOHHH!"

"And I tell you—it's been 'Outta Sight,' once I found the bus for me."

Her new pride and joy is a 1988 Prevost Le Mirage XL—Journey One—and she has big plans for it. "Even though my bus is 22 years old it's still at least five years newer than any commercial bus I ever drove because I retired in 1983.

"No one will ever know how I felt in that moment. I was on a plane for Birmingham, Alabama just hours after he called! I stayed in the bus for a whole week while Don went over and over the bus with me many times. We bought a label maker at Wal Mart and he made stick-on labels for each instrument in the bus so I could learn

Vivian is all smiles behind the wheel of her Prevost, "Journey One." Talk about pride of ownership...

Continued on Pg.8

Although she had not driven a bus in 27 years... she hopped in and drove from Alabama to New Jersey.

them more easily. The labels are all still there and I still depend on them."

"I'm still shaky on the Inverter and not really comfortable with that yet—I may never truly be. Don's advice was to 'Just leave It alone—It'll do what it has to' were his exact words. He and his whole family were so good to me. I went to church with them and they took me shopping too."

"When we got ready to close the deal, we had to drive all the way to Georgia, a 200 mile trip in Don's pickup just to change the Cashier's Check that Bank of America issued in my name because GMAC would not accept the check from me. They demanded a check made out directly to them by Bank of America. I closed my account with Bank of America the minute I got back to New Jersey. Wouldn't anyone?" she added with mischief in her voice.

Although she had not driven a bus in 27 years, when she was finished with her week in Alabama in July of 2009, she hopped in it and drove it back to New Jersey and began planning her trips. She has already attended the Northeast Bus Get Together in Montague, NJ, held in August of 2010 where other participants described her as "a riot and full of life. She certainly has some stories to tell."

Before she finally found her 1988 Prevost Mirage XL however, she searched long and hard and traveled to see several buses, encountering some that were not as the seller described and other sellers who "were just plain dishonest."

As she described, "I took a bus to South Carolina to see this one bus in person, being pretty sure it might be the one for me. But it wasn't at all. I just looked at it and didn't even want to drive it. It was too worn inside and needed too much obvious work that the dealer never told me about until I saw it for myself. Then of course, he took me to see several other buses he knew about and surely would have made a profit on if I'd bought

any one of them. They were really hard selling people and even paid for a motel for me to spend the night so they could take me to see more buses in the morning. They knew for sure that I had the money and was a serious buyer, so they went all out for a sale, but I didn't buy—they had nothing like what I was looking for."
"There were half a dozen others I looked at in person and wrote many letters to the people selling them but I never even went to see some of them for one reason or another after finding out more about each one."

Another buy she missed was because of what she considered a dishonest dealer in Titusville, Florida. Viv still sounds mad when she explains, "The reason I missed out on this 1992 Prevost was that just before I was to go to the bank and sign the final papers, the dealer, Titusville Bus Sales, at a Prevost Campground on the property, called me into his office and told me he'd made a three thousand dollar error in his figures! I didn't believe him, number one, and I would barely have that amount of money left after my cash deposit to him and would need it to get the bus home—and he knew I had it. I just looked him straight in the eye, turned on my heel and walked out of his office. I got in my Van Camper and drove away. After I got over two hundred miles up the road toward New Jersey, he called me on my cell phone several times and pleaded with me to come back. He said I could have the Coach for the agreed on price! I told him if he would pay for the fuel I'd be using to go back I would. He refused and I was so angry that I just kept on going. At that point, I believed that bus would be bad luck for me—and I was so angry at that dealer! Cheat! Much more was in store for me before I was to get My Bus."

Now that Viv has "Her" Bus, she keeps it on her half acre property in Brick, New Jersey, along with a couple of motor homes she hasn't been able to sell and her Chevy Caprice convertible that she uses as her vehicle to tow the RVs. She doesn't tow the RVs anymore because it's hard for her to couple and uncouple the rigs. She has outfitted her bus with lots of "stuff" to personalize it and make it her own. She adds, "You probably have never seen a coach so full—but I have. My other 14 RVs! The nice thing is that when I am at a campground and somebody needs something, I usually have it."

She relies on a local shop about 11 miles from her home in Avon By The Sea, for maintenance and repair. During the photo shoot for this article, when she pulled the bus out, the ground was soft and it got stuck! She says that SRS Autoplex, the local shop, came out with a big tow truck. "It was amazing, they just lifted up the back end of the bus and got it back on the pavement!"

Veteran bus driver that she is, she says she drives for 10–12 hours at a stretch, stopping at a WalMart or camp-

"You probably have never seen a coach so full...
The nice thing is that when I am at a campground and somebody needs something, I usually have it."

One that got away. 1992 Prevost that slipped away due to a dishonest dealer.

Viv has outfitted her bus with lots of "stuff" to personalize it and make it her own.

Minor set back during photo shoot. Viv's local shop came to the rescue to get things back on track.

Continued on Pg.10

Viv's Journey continued.

ground that looks good. When she gets to the Wal Mart, she calls on her cell phone and they bring a scooter out to the bus so she can go inside and shop and stock up for her trip. She usually spends a few hundred dollars and they often allow her to park there overnight, even if it is marked No Overnight Parking, alerting the local authorities that it's OK, because she is an older lady traveling alone.

Alone, except for Sapphire, that is. One of the curses of getting older is loss of hearing and Viv is too familiar with that. Sapphire is a three and a half pound Maltese who is a "hearing dog." Saffy alerts Viv when the phone rings so she can put in her hearing aids and answer, when someone is at the door, and she has special signals for fire and alarm that she has been trained to give.

Viv's copilot, Saffy.

Saffy is her constant companion and co-pilot and a great source of comfort for Viv.

Another curse of aging is loss of loved ones. She is lonely since Leo died in 1998 and she would love to find a companion closer to her age who loves buses and traveling like she does. In the 39 years she was married to Leo, she traveled to Florida 35 or 40 times, and to Ohio, Colorado, West Virginia, Dallas, and other points in between. She keeps herself busy though, with lots of other interests besides buses. She has always loved and kept horses and although she doesn't ride anymore, she often goes to the local stable and feeds and talks to the horses. She loves dogs too. She plays the organ and her newest passion is learning to play the pedal steel guitar—she plans to take it with her and practice on her adventures in Florida this winter. She is an accomplished mural painter and built many doll houses to calm her nerves while her husband was suffering from cancer for so many years. She said she has not painted since her husband passed away, but she has a large unfinished Christmas mural she plans to take along with her and finish this year.

Multi-talented Viv, keeps busy by building doll houses.

A page from Viv's sketch book demonstrates yet another hobby and talent.

She loves country music—thus the pedal steel—and is seriously planning a trip in 2011 to hear some good ol' country music in Branson, visit the RV graveyard in Carthage, Missouri, attend some bus rallies and hopefully, visit the author of this article, so we can cement our growing friendship in person.

It may seem like a lot of Vivian's story is about loss and painful episodes, but it is actually an uplifting account of joy, perseverance, resilience and faith. Asked how she manages to maintain such a positive outlook on life through so many hard times, she didn't hesitate before responding, "I have the Good Lord on my shoulder and he has touched me in everything I've done. Because of getting My Bus, and this article, I will be remembered after I'm gone because of all this happening. My friends and the family I have left will make sure it is passed down to future generations. It's so wonderful to

Vivian's Million-Mile Driving Tips

Vivian McGraw has driven over a million miles in her career as a bus driver, and as a serious traveler. Below are some of her tips for staying safe and having fun in your bus:

1. Remember—in your bus, you are "King (or Queen!) of the Road. You are bigger, more visible and most likely slower than the traffic around you. Act accordingly and Make Friends, not enemies.

2. Never tailgate. Your bus takes much longer to slow down and stop. Give yourself plenty of space and keep your eyes moving following the traffic around you.

3. If you see in your mirrors that you have a long line of cars behind you, when you find a safe place to pull over and let them pass you, use it. Wave as they go by.

4. When a tractor trailer is passing you and going faster than you are, accelerate slightly as the truck passes to avoid being "sucked over" toward it. This slight acceleration will help maintain your distance and stay in your lane.

5. Don't get too close to the right hand side of the road and chance over correcting when you try to return to the pavement. Over correcting or jerking the steering wheel will greatly increase your chances of losing control of the bus and possibly overturning.

6. Slow down and enjoy the scenery. When Vivian was driving from the Port Authority of New York to the New Jersey casinos, she often hit 80 MPH to keep up with traffic. Now that she is traveling on her own, she wants to slow down and enjoy the scenery. You should too.

7. Girls, don't be afraid to drive the bus! It's never too late to learn!

Continued on Pg.12

Viv's Journey continued.

She closes with, "May the Good Lord take a liking to you—I know he has to me. I talk to him every day, but he reprimands me too. None of us are perfect, but I do try."

If you are fortunate enough to encounter this remarkable woman, Vivian McGraw, on her travels in her Journey One Prevost, marked clearly with "Vivian" on the front, please be sure to take the time to stop and spend all the time you can spare to visit with her. See her sketches, drink in her infectious laugh, hear her love of country music in her pedal steel guitar and enjoy her stories about growing up, race car driving, bus driving, horses, dogs and mainly BUSES! I guarantee your spirit will be far richer, and you will be a more peaceful and loving person because you did. I know I am, and our friendship has just begun. Thank you, Viv. BCM

Wendy Crosby is a freelance graphic designer, writer and photographer. She is as new to bus life as Vivian is a veteran and very happy to count this wonderful woman among her close friends. See Wendy and Jim's bus at mightybus.wordpress.com.

Forum member looking for suggestions on how to build a cargo bay tray and install full extension slides.

BUS CHAT

www.busconversions.com/bbs

Dave Siegel The bays on our Silversides are very short and we have a lot of stuff packed into our "Picnic Stuff" bay. I would like to build a tray and install full extension slides to pull that tray out with. I know there are ready made slides that run about $700 for the slides and I have to construct the tray bottom and sides. I can handle that construction, but the budget is keeping me away from those slides.

I have found some 48" full extension slides that are rated for 400 lbs for $228. (They are like giant drawer slides)

Is this the way to go? Has anyone else created something that fits into a low budget? And allows for a basic pull out drawer. I would like it to be full extension approx. 48" or so in depth. The width of the bay is 54" clear side to side. I am open to just about anything that will make getting our "Picnic Stuff" in and out easier. Any suggestions and/or pictures?

pipopak Here is a crazy idea: If you can install 2 U-shaped rails on the top corners of your bay that are twice as long as the depth of the bay itself (protruding into the bay on the other side) you could make a suspended tray that goes out all the way out using some sort of regular wheels and common stock iron or aluminum.

belfert I used some Accuride slides to build a really long slideout tray for my travel trailer. They worked great. I think I ordered them from Rockler. The compartment under the bed was almost the full width of the trailer so the stuff in the back was impossible to get out before the slideout tray.

bobofthenorth I used some slides like the ones you are talking about Dave and they work ..... after a fashion. I've never regretted spending enough to do it right the first time and this is a situation where I should have spent more initially. It depends how much weight you plan to extend. In my case its a 3/4 plywood frame that supports a mechanic's toolbox and several parts drawers. It goes in and out sort of like its supposed to but its a hard heave to get it moving because its weight is more than the slides should be supporting. If I was doing it over I'd bite down hard and buy the heavy slides.

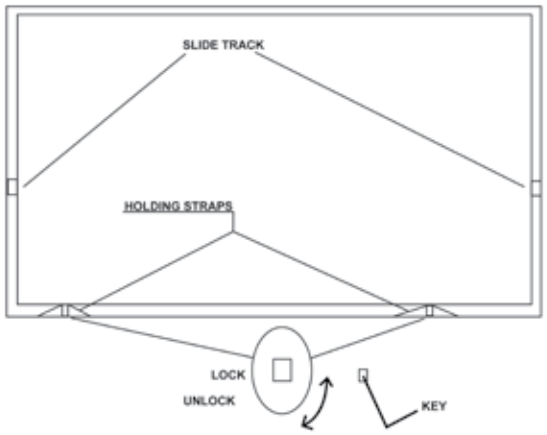
robertglines1 I can't draw so will try to explain; Start out with two 2 1/4 box tubing 1 ft long 1/4 inch wall and two pieces box tubing desired slide length(6ft) basically tube in side tube/ Like a trailer hitch; .is opposite of slide out room application..bolt two short pieces to floor leave enough room for inside tube to extend through about 3 inches put a bracket to support floor about 1 inch tall on both ends of inside tube then build floor. addition of rollers on deep end of inside tube will help with rolling out and in..if your only talking couple hundred pounds will be a little heavy when starting in but not $1,000. If you want more capacity add cam rollers for inside tube to roll on. I push my 15ft slide out room out by hand (must get them motors hooked up soon) I have done this in bays. I did use the cam roller 1 inch carry 3600lbs and they glide in very easy with little pressure. In fact, I needed a latch to keep in place. Cam rollers at bearing supply $21 each tubing 2ea 1 ft pieces with 1/4 wall and two 6ft pieces $30 dollars. Just a idea. PS: You'll loose about 4 inches in bay height.

luvrbus The best I found for a roll out are called linear wheels you can buy those with a v groove and the rail or flat wheels and make your own rails they will handle the weight.

Rick59-4104 My wife loves to cook, I swear she goes camping to cook, My son-in-law is wanting to build a slide out fold down outdoor kitchen in 1 of the 4104 bays. Maybe next year.

wrench You can build something like this. Use a low carrying track & lock the drawer with a wedge so the wedge will carry the load while shaking down the road & keep the drawer from moving. The track will be carrying the load only to open & close. May work.
(See sketch on Pg. 14)

Continued on Pg.14



Dave Siegel Wow, what a lot of great input and ideas. However the real answer lies in doing it right the first time, and that requires spending more than I have to get the job done. I know that the heavier slides are the way. Joey beds are probably a good way to go but I am 2000 miles away from them so I guess they are out.

Thank you guys for some really good input and way to go. I will keep you posted as to what I finally do.

The preceeding exchange was gathered from forum posts on the Bus Conversions Bulletin Board on our website. The title of the article is an original posted question. The answers are the replies that followed. Note: replies are sometimes edited for spelling, grammar, and length.

More Misadventures with Bryan, Rhonda and Zeke...

Rodeos and Bus'N USA

BRYAN LARRABEE

Hauling our GM PD-4108 bus out of winter hibernation last May, we decided to take her up to Ashcroft, British Columbia. Rhonda's brother's country and western band was playing at the Ashcroft Stampede Rodeo Dance. It was the 48th year for the rodeo.

Before we left, I had noticed that one of our brake lights was really dull. Probably just needed the lens cleaned up, but when I removed it, I noticed the bulb and socket were rusted firmly together. As soon as I touched the rusty socket, the bulb burned out. Why can't I just leave things alone? With a lot of careful patience, I worked the bulb loose and replaced it. Neither lens had a gasket, which probably was part of the problem, so I used a tube of gasket goop to make my own. Problem solved? Certainly not! On the drive up to Ashcroft, we noticed that the brake light would go off with every bump in the road hit.

Ashcroft is a 5-hour drive north from Vancouver, taking the scenic Fraser River Canyon route. With the river on your left, the highway sometimes rises to dizzying heights and at other times drops down to the bank of the river. At Lytton, the highway takes a departure and follows the Thompson River through near-desert scenery. Before Cache Creek, we took a long descent on a narrow highway, crossing the river into Ashcroft. The small RV park is practically in the centre of town within walking distance of the rodeo dance.

We dropped by the dance early. By 9 pm, the arena started to fill up, many of the cowboys coming from the beer garden at the rodeo. The crowd was primed and the dance floor was full on the first song. By 10 pm there were 700 people dressed in western gear, cowboy boots and hats. By 11 pm the dance floor became a two step demolition derby as couples whirled around the floor with abandon. At 12:30 the bar ran out of beer and the crowd dissipated into the night. I'm sure many of the cowboys will be riding bulls and roping cattle tomorrow with a hangover.

In the morning, I decided to have a look at the brake light. It took me an hour to remove the lens carefully because the gasket goop had turned into an effective glue. I changed the bulb and tested it out by tapping on it. It looks good, so I put the lens back on and we headed home. By the time we got halfway, the brake

Continued on Pg.16

More Misadventures...

light was out again. So before we start our trip to Oregon, I called my friend James Pearson and he replaced the pigtail spring, cleaned up the rusty socket and shaking his head, scraped out the gasket goop and replaced it with strip caulk.

We're now ready to leave for the Bus N USA Rally in Oregon. On Wednesday morning, I can hardly wait to fire up the bus and head south. This wouldn't be a story about misadventures without starting out with one from the top. If you were to decide what the greatest catastrophe would be for a bus holiday, would it be:

a) Having the engine drop out of your coach in Death Valley.
b) Getting six flat tires as you accidentally run over debris on the LA Freeway
c) Starting a six-day trip with your radio/cd player not working.

If you guessed c) you would be correct and fully in tune with all the women in my family. It was a very quiet drive and we spent the first night at a Casino RV park in Rochester, Washington. Zeke and I searched through all possible locations on the coach until we found the right fuse and fixed the music problem. Of course it required flexibility, dexterity and a few cuss words to change the fuse. Did I say that nothing is ever simple on this bus?

Returning to the I-5, the drive south was beautiful with snow-covered Mt. Rainier on our left and as it disappeared in our rear view mirror, the ruined peak of Mt. St. Helens came into view. It's hard to believe that it's been 30 years since the catastrophic volcanic eruption. The drive is uneventful and we stopped a few times to play "flingball" with Zeke. We decided to rent a car in Dallas, Oregon so that Rhonda and Zeke could go sightseeing while I attended the rally seminars. I parked on a quiet block off the main drag. As I stopped the coach, she stalled before I could shut her down. So I just turned all the switches off and set the emergency brake. We went over to rent the car and pick up a few extra groceries. We returned to the bus an hour later and put everything away. I jumped into the driver's seat, flipped the engine run switch and tried the ignition. The bus fired, ran for 3 seconds and stalled. I tried again, same result. Tried again, and the starter turned but the coach wouldn't start. I thought "Can I possibly be out of fuel?" I checked and I had more than half a tank. I was completely at a loss.

Rhonda suggested that since we were only 4 miles from the rally, maybe someone could help. So I jumped in the rental car, leaving Rhonda and Zeke to guard the bus. I can stand in front of 500 people and make a speech without a second of stress or anticipation, but I'm shy about asking for help with our coach. I found Dave Gregory and he started to introduce me around and I was immediately surrounded by several people who had suggestions. Two fellows (Pat MacPhail and John Garbett) from the BC Bus Nuts group were willing to finish up their hot dogs and follow me back to Dallas to have a look at the problem.

We pulled the fuel filters, but they were fine hadn't lost the prime. We tried a few other ideas, but still couldn't start the engine. After about 20 minutes of tinkering, Pat, John, and I were standing with our arms crossed looking at the open engine compartment. Suddenly there was a click and the brake lights came on. We all looked at each other and John said "Well, don't just stand there, try to start her again." As I jumped into the drivers seat, I flipped the ignition and vroom! The bus started! I can't say for sure that it wasn't divine intervention, but through the weekend there was much discussion among the group trying to solve the problem. After I got the coach home, my trusty friend James diagnosed the situation and came to the conclusion that it was caused by a rusted circuit breaker in the electrical panel beside the drivers seat. The breaker was for the shut down solenoid on the engine. It was so rusted it looked like it came off the Titanic.

The solution to our stalling problem. A very small circuit breaker.

Getting back to the rally, the food was great and the seminars were informative

with varied topics. The best part of the weekend was finding and catching up with old bus friends from past rallies. The nightly fire pit was a hit and we toured some very interesting coaches and got some great ideas to steal. Out of over 80 rigs, our bus was the only "buffalo style" coach this year. Where were our buffalo pals?

Next to the fairgrounds is a small park with a creek and a perfect swimming hole for Rhonda, Zeke, and I to cool down. By late afternoon, it was full of local kids playing on the rope swing. A scene straight out of Huckleberry Finn. We followed our swimming sessions with a game of flingball to dry the dog off.

Dave Gregory showed me how to bypass the engine shut off on our bus, so if we got stuck again we could get started. But our bus wasn't fixed yet unless you subscribe to the divine intervention theory. So we began our trip home with cautious anticipation wondering if the engine would just cut out and stall at any time. I felt like I was driving a time bomb. A truck dumped a load of watermelons all over the highway in Portland and delayed us for an hour. I kept looking at the shoulder hoping I wouldn't need to pull over.

We decided to stop at a casino RV park north of Seattle on Sunday night. There was a huge fireworks market aptly called "Boom City" across the field. To Zeke's distress, all you could hear were firecrackers going off every few minutes until midnight. We cranked up the tunes and closed all the blinds and I did some work on my computer. In the morning you could still smell the gunpowder in the air. It felt like we had been in a Civil War movie all night.

Our last day on the road was relaxed and uneventful. We even got through the Canadian border without breaking any mirrors. We logged a total of 818 miles on that trip not counting the pre-trip to Ashcroft. Ending with an expanded "to do" list for the coach.

1/3 of the Misadventures' crew, Zeke, enjoying his spot in the GM PD-4108.

BCM

Heating a Bus

By Dave Galey

As the seasons change to winter we are reminded of the importance of heating systems in our buses if we ever want to use them in cooler weather or cooler climates. There are a variety of approaches to heating a bus conversion. In this excerpt from Dave Galey's famous book "Bus Converter's Bible" he discusses the common options and their respective advantages/disadvantages. Dave Galey's books are available in the BCM online store in e-book format (PDF), just go to www.BusConversions.com/store/. Or you can get the print editions as part of a bundle by going to www.WinlockGaley.com.

Assuming you have decided to retain the original heating and cooling system, it is obvious that this system is not useful when you are parked. What should you add for heating comfort while parked in a campground, a state park, or near a quiet stream? A myriad of answers come to mind. Let's examine each one

Diesel Boiler

The first system which comes to mind is the diesel fired boiler. The heart of this system is a package about the size of two footballs, end to end. It uses engine radiator coolant pumped past a diesel burner, then circulated throughout the coach to individual radiators, or radiant finned units with individual fans similar to baseboard heaters, to extract the heat and deliver it to each compartment. The coolant is then re-circulated to the burner section to repeat the action. One system uses a single loop, so by the time it is nearing the end of its loop, most of the heat has already been extracted. A more efficient system uses two loops. One loop circulates only hot water while the other loop returns cooler water whose heat has been extracted. Make-up water to the burner is drawn from a reservoir, while the return cool water is delivered to the reservoir. This system is thermostatically controlled, which automatically ignites the burner, activates the circulating pump, and turns on the fans at the individual radiator units.

One major advantage to this system is it also serves as a engine preheater, since engine coolant may be circulated through a heat exchanger. This can be a very useful thing in cold weather. Diesel engines can be very stubborn to start when cold.

Several brands of this type of heating system are available. Probably the most well known brand of this type heating system is the Webasto. The Webasto sys-

tem comprises the boiler heating a coolant in a closed loop, supplying heat to various fan/heater elements back through an expansion tank to be recirculated. Although copper piping with its soldered joints is an ideal material for circulating the coolant, the risk of fire from the installation and soldering of the pipe and its fittings has caused other materials to be used. An excellent substitute for the copper piping is 3/4-inch diameter heater hose. The hose may be swept in gradual turns, and where an abrupt bend is needed, a copper fitting prepared outside the coach may be coupled with the hose. The spring loaded type hose clamps are recommended since they apply a constant pressure regardless of the temperature. There are also various high temperature plastic piping systems now available which will function in a satisfactory manner. The maximum temperature routed through the heating system is 180 degrees Fahrenheit.

The coolant for the heating system must be a mixture of 50/50 — water and antifreeze. This circuit will be totally independent from the coach engine cooling, but through a heat exchanger may be used to preheat the motor. The circuit is normally a parallel circuit sending hot water out to the various fan/heater units and returning cooler water to the boiler through and expansion tank. It is essential the expansion tank be above the level of the boiler, and accessible. This tank is often placed inside a closet. In this circuit it is mandatory there be no air entrapment. In the event small bubbles are encountered, the boiler may cause a high temperature safety fuse to burn out and the unit will not function until it has been replaced. It is for this reason the water circuit be isolated from the engine coolant, in that tiny bubbles can develop in the engine water that are eventually eliminated through the radiator cap. The flow rate of the coolant is normally about 6 gallons per minute so that 3/4-inch hose provides adequate flow rate over about 100 feet of circuitry and three full flow fan/heater units.

Heat exchangers are available for not only preheating the engine, but for providing domestic hot water for bathing and cooking. In addition, electric water heaters are available with built in heat exchangers so hot water may be obtained from shore power, generator power, or from the Webasto boiler unit. Circuitry has been developed so in summer months when no heat is needed, the boiler will supply hot water to the heat exchanger for domestic hot water.

Diesel fuel to the boiler unit should have its own supply line rather than teeing-off of the main fuel line to the engine. A tee intersecting the main engine supply fuel line has been tried in the past and has consistently caused problems. The fuel supply to the boiler unit is similar to the engine in that it has a sup-

Continued on Pg. 20

Heating a Bus continued.

ply and a return. A specific tank should be dedicated to the heating unit for reasons mentioned earlier in this book; the lesser cost off-road fuel may be used for heating. This tank should supply both the heating system and the generator The unit should be mounted in such a manner it may be accessible for maintenance and it would be a good idea to provide soundproofing around the containment box. Both the boiler and the circulating pump can be noisy. A further contributor to the high noise level is the exhaust pipe, which must be routed outside. Individual fan/heaters are available to be placed in strategic locations. These units, on average, produce about 7,000 BTUs each. The entire system may be controlled by thermostats, or a combination of thermostats. For example, three units may be controlled by a thermostat in the living room/kitchen area, and another two units may be controlled by a thermostat in the bathroom, or bedroom area. Another more passive heater is available in the form of a baseboard finned unit. The baseboard finned units can be had in the form of 2 x 2 inch fins along a 3/4-inch pipe in almost any length. These non fan baseboard heaters are customarily set about 1-1/2 inches above the floor or carpet along the baseboard. The cold dense air slides down the wall from the windows, is heated by convection and rises to replace the cold air. Another fan/heater unit from Webasto is the toe-kick size which may be installed under the cabinet in the recessed kick area such as a bathroom cabinet or the kitchen counter. Each of the fan/heater units have either an in-line or elbow air bleed fitting on the downstream side to make sure no air resides in the circuitry.

The Webasto coolant heaters can be ordered in 12VDC and 24VDC configurations and have heating capacities ranging from 16,000 BTUs to 160,000 BTUs. Perhaps the most useful size for a conversion is the Model DWB2010 whose output is 40,000 BTUs. Webasto also markets an air heater with capacities ranging from 6,000 BTUs to 40,000 BTUs. I am currently unaware of any converted coach employing the use of the Webasto air heaters. The average electrical power consumption is about 51/2 amperes at 12VDC, and about a quart of diesel fuel per hour.

A competitor to the Webasto is a newer product with the trade name ProHeat, manufactured by Teleflex. This unit was originally developed as an engine pre-heater for large diesel trucks operating in very cold areas of North America. ProHeat produces two sizes, a 30,000 Btu and a 50,000 Btu unit. Since the ProHeat device is a much newer product than the Webasto, it employs newer technology. It has a computerized controller with memory which may be down loaded into a personal computer. This allows the system to be diagnosed by a service station to determine the last 50 starts, to see if, for example, a low voltage was present. Other readouts include number of hours, water temperature, number of cycles and other parameters. It also uses a compressor to finely atomize the combustion air to the fuel nozzle for more efficient burning.

The big market for the ProHeat is the trucking industry, not converted coach sales. Hence, service stations are being located all over the country. These units are being installed on new trucks for several reasons. The newer engines such as the Detroit Series 60 do not produce sufficient heat for heating the cab, so auxiliary heaters must be employed. In addition, due to the Clean Air Act, in many location trucks are

not permitted to idle, so again, auxiliary heaters must be used. Many of the newer production coaches are including diesel fired boilers for passenger heat and defrosting.

The ProHeat system is comparable to the Webasto in performance and cost. The principal difference is the ProHeat is a newer design using the latest technology. And because of the truck market, more service

stations are available. A rough order of magnitude cost for a complete ProHeat system is about $3,300. This figure includes four space heaters, thermostats, valves, expansion tank, a heat exchanger for engine heat, and a heat exchanger domestic water heater. Again, this represents the components less the piping and installation labor. The AquaHot system uses the Webasto heater, but is effectively an engineered system with all controls and plumbing, and is considered the top of the line when it comes to diesel heating for motor coaches.

Electric Heaters

Electric heating generally costs more than energy obtained from the combustion of a fuel, but the convenience, cleanliness, and reduced space needs of electric heat can often justify its use. The heat can be provided from electric coils or strips used in varying patterns. For example, convectors may be in or on the walls, under windows, or as baseboard radiation.

Electric heating is one of the safer forms of heat. In addition to being safe, the electric heater also is convenient to install, and might be located in areas which are unused. Since heated air tends to be displaced by colder more dense air, consequently rising, the obvious location for a heater, regardless of their energy source, is near the floor.

One form of an electric heater is a small thermostatically controlled unit mounted in the toekick area underneath cabinets and furniture (see the photograph below). The unit is appropriately call the Perfect-Toe. This unit is 31/2 inches high, and 17 inches wide, by 10 inches deep. It is capable of producing 1000 watts of heat, and has a built-in thermostat switch. To compare this output with our heat load in BTUs, each kilowatt-hour of electricity equals 3412 BTUs. Each one of these toe-kick heaters generate 3412 BTUs. In my personal coach I use four of these units, augmented with two 6000 Btu Catalytic heaters, and have been comfortable in sub-zero weather in Utah. The only drawback to this unit is that each unit has its own controls, so that they are not centrally controlled. However, a simple circuit could be designed that would control all the units in a coach from a single thermostat, after each unit had been tuned to its optimum performance.

Another form of electric heat is the baseboard heater. One drawback to this design is that much of the baseboard around a coach is occupied by built-in furniture, or other permanently mounted facilities.

Still, it would be a simple matter to route the heating elements in such as way to become part of the built in furniture, or other facilities.

Propane Heaters

In most motorhomes and lower cost conversions, propane is the fuel of choice. Propane is an odorless gas, and is one of the fractions of crude oil. An agent is added to propane which gives it a distinctive odor of strong garlic. A propane leak is very easy to detect with its distinctive smell.

The Primus system is similar to the Webasto except for the fuel, which is propane. The Primus boiler has been discontinued. The Primus system has similar types of heaters as Webasto, but they stress the passive radiant fin baseboard type. It was considered the top of the line for propane.

The RV industry has developed many options for propane heaters. The most common propane heater is the forced air type, which takes in outside air to support combustion, exhausts theproducts of combustion to the outside, and heats a radiator section over which air is blown. This heated air may be blown directly into the living compartment, or directed through a series of 4-inch ducts to strategic locations. The outlet of these

Continued on Pg. 22

More "Heat"

ducts may be controlled with a register which may be throttled with dampers, or movable vanes used to attenuate the flow of air. The most significant drawback to this type of heater is its poor efficiency rating. Since, for safety, it must draw in outside air for combustion and expel these products of combustion, much of the heat is pumped overboard. This is patently obvious if you have ever stood next to one of these exhaust ports in the winter and felt the heat being expelled. Regardless of this inefficiency, propane as a heating fuel is relatively inexpensive, and these heaters can do an effective job of heating a coach. Such units are normally installed in a closet, or inside a table, or beneath a bench seat, or even in the baggage compartment, so one side is adjacent to an outside wall. Most are thermostatically controlled and are operated by a 12VDC-current.

Several brands names are available for this type of furnace. They are: Suburban, by Dometic, and Hydra-Flame, by Hydra- Flame.

Catalytic Heaters

Another, more effective form of propane heater is the catalytic heater. This heater uses a platinum mesh and fiber matrix which allows the fuel to burn without a flame. The burning in this matrix will glow and produces a radiate form of heat. It is actually a form of convection combined with radiation, with the prominent form being radiation. These units are mounted as a wall unit, which is a draw back since wall space in a conversion is a premium.. The less sophisticated units use a mechanical pizzo-electric igniter, similar to those seen on barbecues. While striking the igniter, a gas valve must be held down to light the pilot. After the pilot is lit, the main gas valve may be opened as desired. This unit requires no electric power to the installation, only a source of propane.

The Olympia catalytic heater is an example of this kind. The Platinum Cat, produced by Thermal Systems of Washington, is a well engineered catalytic heater which uses a tiny blower to vent products of combustion through a small duct to the outside, and is thermostatically controlled with an automatic igniter. The unit must be supplied with a 12VDC power source, along with a supply of propane. Again, the unit must be mounted on a vertical surface similar to the old fashioned wall heaters installed in the cheapest houses built after World War II. I have seen this unit installed in an area over the drivers section located behind cabinet doors. This form of installation is not recommended, but with adequate heat shields on the inside of the cabinets, and doors, and with a fail-safe interlock so the unit is disabled when the doors are closed, this installation appears to be satisfactory.

Although the following two paragraphs have appeared elsewhere in this book, it bears repeating for the sake of emphasis. Propane requires another fuel be carried along in the conversion. It is customary in many production motorhomes to install a permanently mounted tank to store propane. This type of installation requires the coach be driven to the propane filling station for re-fueling. At times this can be inconvenient, and especially when the maneuvering room is limited. A more convenient installation is to use portable tanks which may be disconnected from the coach and taken to the re-fueling location in a car, or other smaller vehicle. Propane is stored as a liquid at high pressure and reduces to a gas at very low pressures. A pressure regulator is installed between the storage tanks and the service line. Black iron pipe is the material of choice for propane distribution throughout the coach. The onehalf inch iron piping is routed close to the appliance, then a gas cock is installed. The chapter on propane shows schematic options. From the gas cock, which allows the appliance to be disconnected from service, a propane hose is routed to the appliance, using 45 degree flare fitting connectors. It is important each appliance being served by propane be able to be isolated and disconnected. Another form of installation is to feed the low pressure propane from the pressure regulator into a manifold with a series of gas cocks, one for each appliance. From that point an LPG hose may be run to each appliance. It is mandatory that only hose which is clearly marked LPG be used. This sort of hose has the approval of the Underwriters Laboratories. If another material is used and there is an accident, the insurance claim would certainly be denied.

It is commonly believed copper piping would be acceptable for propane distribution. Copper is outlawed in California for LPG because the odor causing agent added to commercial propane is highly corrosive to copper alloys.

Diesel and propane heating systems require a specific minimal electric power to operate The equipment requiring the most electrical power would be the diesel fired boiler, which uses power to drive the circulating pump and the individual fans or blowers at each radiator. Next would be the forced air heater, which needs power to ignite the unit and operate the blowers to circulate the forced air. Finally, the lowest power drain

would be the catalytic heater with its tiny ventilation blower and automatic igniter. Normally, the concept of heating the baggage compartments would not be considered. This may be worth an examination in the event water pipes are routed through this space. Some form of thermostatically controlled heat would be very prudent in any space occupied by water piping if the colder climates are visited.

Although, hot and cold water pipes are available that are freeze resistant, there is a temperature below which virtually no pipe can stand up. Even if the water piping is made of heater hose, which will not break if it freezes, the inconvenience of frozen pipes is worth the effort to keep them ice free. A simple way of heating pipes is to wrap with a tape made just for this purpose. A built in thermostat will turn on the heat tape at about 35 degrees.

For background purposes a brief discussion of heat pumps is included. A heat pump is a system designed to provide useful heating and cooling, and its actions are essentially the same for either process. Instead of creating heat, as does a furnace, the heat pump transfers heat from one place to another. In cold weather, a liquid refrigerant such as Freon, is pumped through a coil which is outside the area to be heated. The refrigerant is cold, so it absorbs heat from the outside air, the ground, well water, or some other source. It then flows first to a compressor, which raises its temperature and pressure so it becomes vapor before it flows to an indoor coil. There the warmth is radiated or blown into the room or other space to be heated. The refrigerant, having given up much of its heat, then flows through a valve where its pressure and temperature are lowered further before it liquefies and is pumped into the outdoor coil to continue the cycle.

To air condition a space, valves reverse the flow so the refrigerant picks up heat from inside and discharges it outside. Like furnaces, most heat pumps are controlled by thermostats. Most heat pumps use atmospheric air as their heat source. This presents a problem in areas where winter temperatures frequently drop below freezing, making it difficult to raise the temperature and pressure of the refrigerant. Heat-pump systems are now being used extensively not only in residences but also in commercial buildings and schools. BCM


BCM
Miss December 2010

1988 Prevost Le Mirage XL

List of Websites used by Vivian in the search for her "dream."

prevost-stuff.comsponsors/map.html
luxurycoachesforsale.com
prevost-stuff.com
rvtrader.com
prevosttrader.com
horizoncoach.comindex.cfm?
nationalmultilist.comsearch.php
heartlandbus.comSearchResults.cfm
.philcooper.com
buddygregg.comrvcoaches/coaches.aspx
pplmotorhomes.com
eaglespridervsales.com
millenniumluxurycoaches.com
amadascoach.com
tomjohnsonrvcenter.com
floridaluxurycoach.com
eldoradorvandmarine.com
rv4sell.com e-mail Mel@rv4sell.com
rvtraderonline.com
rvsearch.com

FIRE SAFETY

Anytime you discover a fire, your FIRST action should be to call 911. Never underestimate the extent of a fire. FIRE CAN DOUBLE EVERY 2-3 MINUTES. It is very easy to become overtaken by a fire when attempting to extinguish it with a small portable extinguisher.

JACK CONRAD

Although I will briefly discuss fire suppression, the main purpose of the article is to prevent fires in the first place. I will try to keep this relative to buses and bus conversions.

Fire behavior used to be considered a 3 sided triangle. The ingredients needed to sustain a fire were fuel, oxygen, and heat.

Research in the last few years has found another necessary component. That is the self-sustained chemical reaction that occurs. Stopping this chemical reaction can be useful in stopping a fire.

The first ingredient is a fuel, something to burn. Fuels are broken down into 4 classes:

CLASS A is "ordinary combustibles" basically this is solids such as wood, cloth, and plastics. The solid does not actually burn, but when heated, it gives off gases which burn. This process is called pyrolisis. The larger the mass of a fuel, the more heat it takes to create the gases. This is why it is harder to ignite a piece of 2x4 lumber than it is to ignite a small stick.

CLASS B is flammable liquids and gases such as gasoline, LP, and diesel. Similar to class A fuels, the liquid does not burn, but gives off vapors which burn. The flash point is the temperature at which a liquid gives off vapors that will ignite. Gasoline has a flash point of –45 degrees F. Diesel has a flash point of 140 degrees F. This is why diesels are more difficult to start in severe cold weather. With a flash point of 140, unless you are in the middle of Death Valley in July, your diesel is below the flash point. This is why diesel is a much safer fuel. With a flash point of –45 degrees, unless you are in North Alaska in January, your gasoline is always giving off vapors. The vapors are heavier than air and will settle unless there is adequate air movement to disperse them.

CLASS C is actually a class A or B fuel with live electrical involvement. This is important for 2 reasons. The first and most important is personal safety when trying to extinguish the fire. The other important factor is that the electrical source may be the ignition source for the fire. If this source in not shut down, the fire may restart.

CLASS D is combustible metals such as sodium and magnesium. This is a very technical class requiring a specific suppression agent for each metal involved.

The fuels in a bus include the obvious such as diesel fuel, wood & fabric used in the conversion, and possibly LP or gasoline. Some other less obvious fuels include tires, brakes, grease/oil, installed wall and ceiling insulation, and insulation on electrical wires.

The next ingredient needed is oxygen. Oxygen sources are broken down into two classes: external and internal. External is the air near the fire. The air around us is composed of 20% oxygen, which is sufficient to maintain a fire. Internal is oxygen that is created by the heat of the fire in certain substances such as oxidizers. Removing the oxygen is one way of stopping a fire.

The other ingredient necessary is heat. Enough heat is required to heat a substance to a temperature that will allow it to give off enough flammable gases to maintain a fire and reach the ignition temperature for those gases. The most common sources of adequate heat to start a fire are friction, flame, electrical, and internal combustion. One of the leading examples of fires caused be friction are brake fires. A common cause of fires started by flame are kitchen fires. Electrical fires can be caused by short circuits or overloading. Either result in wire becoming hot enough to ignite the insulation on the wire, which in turn, heats and ignites other flammables. Internal combustion engines as a ignition source are more commonly gasoline engines with a gasoline leak.

Now that we know some of the sources of fuel and ignition sources, we can walk around our bus and do an inspection. On the outside and in the engine compartment are brakes, wheel bearings, tires, electrical wiring, grease on a hot engine, and fuel lines, filters,

Continued on Pg. 28

Fire Safety continued.

and tanks. To prevent fires in these areas we should make sure brakes are properly adjusted, wheel bearings are properly adjusted and have adequate lubrication (oil or grease), and tires are properly inflated. Check electrical wires to ensure that they are protected and well anchored where exposed and insulation is not broken. Keeping the engine clean eliminates chance of grease/oil fire as well as making it easier to locate leaks before they become serious. Fuel lines, filters and tanks are a DUH. Any leak should be corrected as quickly as possible.

The inside of bus has many more fuels and several ignition sources. The main ignition sources inside are electrical wiring and kitchen stove. Fuels are almost everything inside the bus.

Electrical wiring should always be protected with the proper size fuse or circuit breaker. If you put a 30 amp fuse on a number 10 wire then reduce the wire size to 16, the 16 gauge wire is not protected. Any time you go to a smaller size wire you need to install a smaller fuse/circuit breaker. I do a demonstration at fire safety seminars to show how fast an electrical fire can start. I take a 2' length of standard 12-2 house type electrical wire , strip the outer sheath back about 6' on each end, then strip about 1" on insulation off each black wire. Using the white wires for handles (wearing gloves and safety goggle) touch the ends of the black wire to the terminals of a fully charged 12 volt SEALED battery. The wire burst into flames instantly. ALWAYS FUSE any electrical wire with proper size fuse.

The other big ignition source in a bus is the kitchen stove. In the event of a stove fire, DO NOT APPLY WATER. This will only spread the grease. Quickest simplest, least messy method is to cover with a pan lid. This removes the oxygen.

Two other fuels that I had only briefly mentioned are LP and gasoline. I think everyone knows how volatile these fuels are. The fumes from these fuels are heavier than air and will settle in low spots. This is why code requires ventilation in the bottom of an LP compartment.

LP has a chemical added to give it a distinctive smell. If your wife says she smells LP, believe her. Research has shown that women have a much better sense of smell than men. If you have LP on your bus, install an LP detector. There is a valve available that will automatically shut off the LP in the event the detector senses the presence of LP.

If you carry gasoline, the tank should be vented to the outside of the compartment of have a vent installed in bottom of the compartment.

In the event of a fire, what to do depends on several factors, such as what is burning, how big the fire is and where it is.

Brake fires require the brake drum to be cooled to a temperature below the ignition point of the linings, tires, and grease. Best method is lots of water to absorb the heat. Since most RV water pumps have a marginal at best output, we are considering putting a marine "deck wash" pump on our bus. This will be connected to a 25' pre-attached hose on each side in rear baggage compartment. This would reach all wheels.

For interior fires, unless very small, the safest policy is to immediately leave and shut up the coach. Closing up the coach helps prevent additional oxygen from reaching the fire, thereby slowing the spread of the fire. In addition to the heat of the fire, many of the plastics used today give off very toxic gases when they burn.

Engine/generator fires are best fought using a dry chemical to stop the chemical reaction and smother(remove oxygen) the fire.

In case of electrical fire, the first action should to disconnect the power. This removes the ignition source. A main disconnect at each battery bank is very helpful for this purchase.

Fires involving LP are extremely dangerous. If this occurs immediately move back to a safe area. When Fire Department arrives, advise them of LP location. In the event you find yourself inside your coach with a fire, make your way to the nearest safe exit staying as low as possible. PLAN AHEAD Make sure everyone in your coach knows how to open all emergency exit windows. Also have a plan as where everyone should meet once outside of the bus.

If you are building your bus, plan at least one emergency window in the bedroom. One on each side is better. We also installed two large windows in the front (one on each side)that have openings large enough to crawl through.

One final important note. If you have a deadbolt in you door, it should NOT require a key on the inside. Do you think you would remember where the key is if trying to get out in an emergency?

I have only briefly mentioned alarms, detectors or the different types of fire extinguishers. That is an article in itself. BCM

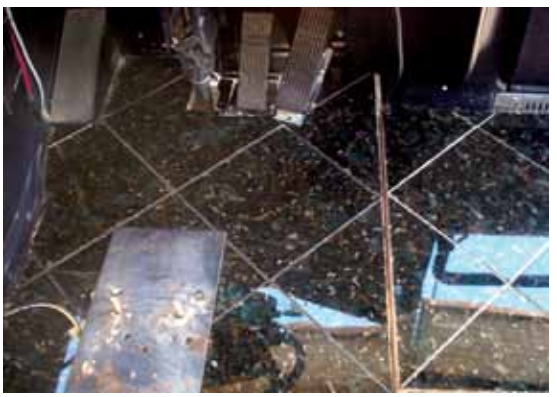
Jack Conrad is a retired fire department paramedic and has seen the consequences of poor fire safety practices countless times.

A New Floor for an 05 XLII-DS

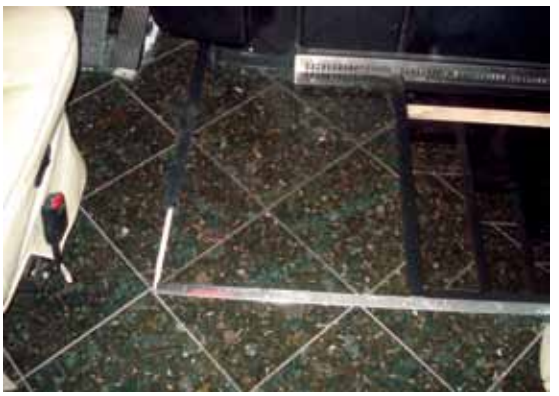
Like many of us Joe & Debbie wanted a new floor in their bus. They chose a marble floor and did a beautiful job of it that adds a really nice touch to their already great looking bus. Not only that, they took lots of photos of the work in progress. Here we present a few of those photos so you can join with us in saying "Nice Job!" and perhaps get some ideas for your own flooring project.

JOE CANNAROZZI

I used the corner of the landing and the flat edge going down the slide to decide where my center line would be.



Nice close fit in the driver's area.



I did this because I wanted to keep the landing at the top of the stairs removable and the lower dash and step-slide accessible and the pattern would line up. It also made cutting for installation a lot easier.

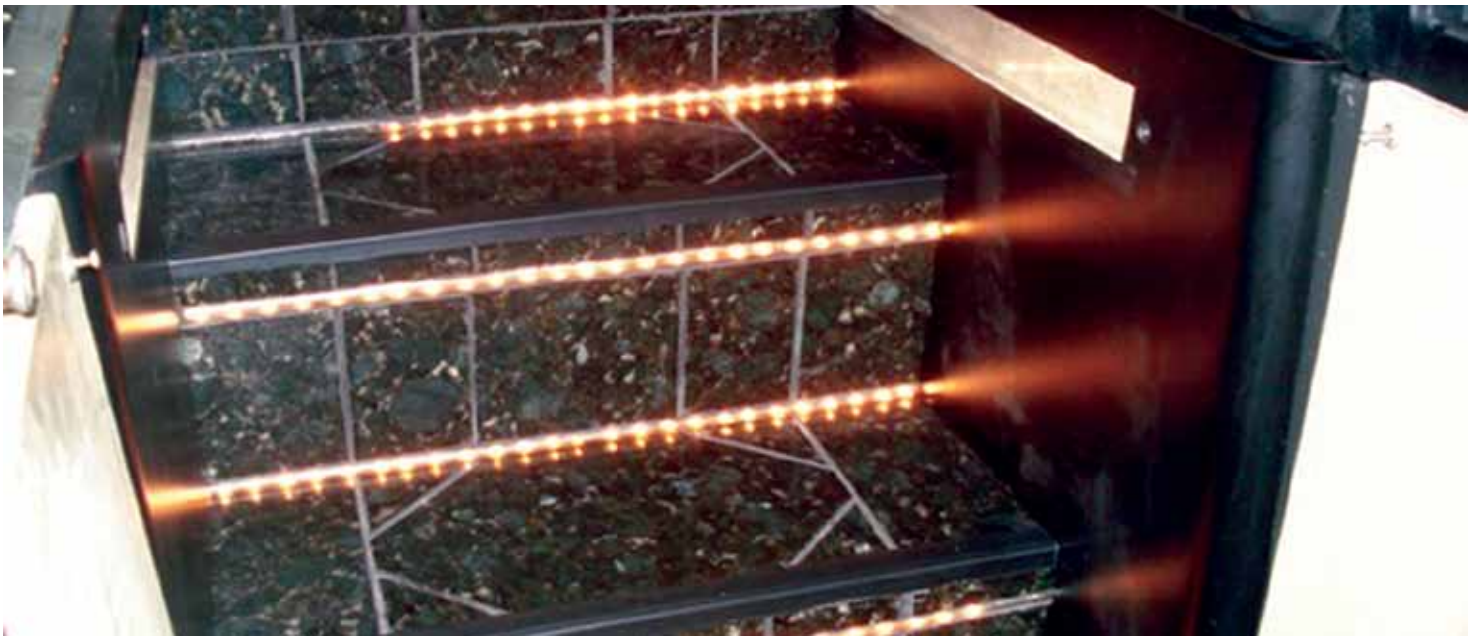
Continued on Pg. 30

Because of the close quarters I had to make my way down one side and back up the other or I would have worked my way into a corner and had to crawl out the window.

Looking good!

I had to come up with a pattern for the stairs that was different from the rest because the layout I chose for the floor did not center them. It was a lot of cutting but IMO (in my opinion) it turned out perty dern well.

New Floor continued.



I used 1/2 inch backerboard all the way out and down the stairs accept for the risers and I used liquid nails for marble there. Hope this gives some inspiration.

Electrically Speaking

Welcome to *Electrically Speaking*, where I answer your house electrical questions.

SEAN WELSH

In my fifteen years of RVing, I have encountered all manner of mis-wired or otherwise inadequate shore power outlets. While some problems were little more than a nuisance, some posed an immediate threat to the safety of anyone aboard, and some could easily damage or destroy appliances and other equipment on the coach. I've encountered these problems even at some high-end RV parks where most people would expect such things to be safe.

For this reason I always recommend that you test any shore power outlet before connecting your shore cord to it. Properly testing any kind of shore service requires just a single tool: a voltmeter with a 300-VAC range and probe tips at least 5/8" long. These are available at most home improvement stores for about ten dollars.

To test any receptacle, you need to measure the voltage between each pair of slots. For a 50-amp service (figure 1), which has four slots, this requires six measurements, and for 30-amp (figure 2), or 15/20-amp (figure 3) service, which each have three slots, it requires only three. The receptacle is safe to use only when the voltage readings fall within the limits shown in this table:

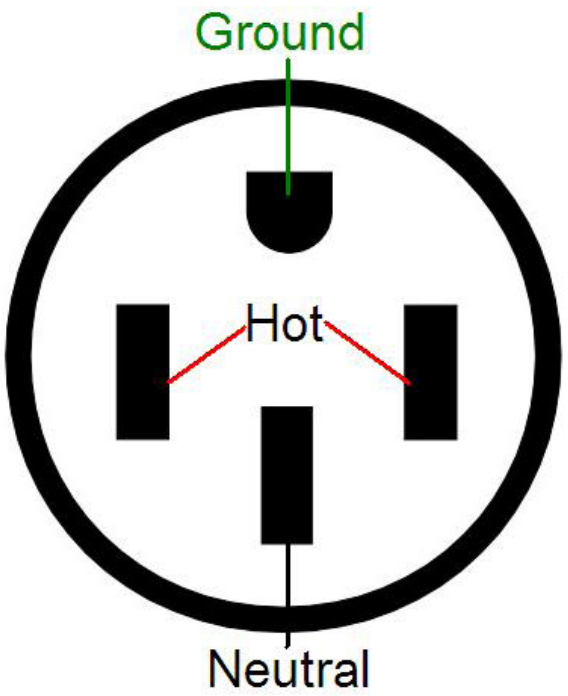


Figure 1: NEMA 14-50 receptacle.

Pair of Contacts	Acceptable Values
Hot/Neutral	110-125
Hot/Ground	110-125
Neutral/Ground	<1 volt
Hot/Hot	208-250

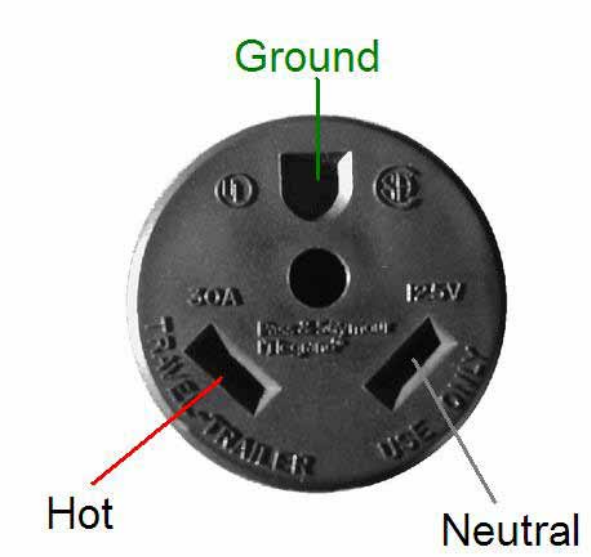


Figure 2: NEMA TT-30 receptacle.

Note that only four lines are shown in the table, but you will make two separate "Hot/Neutral" measurements and two separate "Hot/Ground" measurements for a 50-amp service, for a total of six measurements, since there are two hot leads. For the other services, you will omit the last measurement since there is only a single hot lead. For terminal identification, refer to the figures.

Obviously the shore breaker must be energized to conduct this test, and please be careful when inserting the meter's probes into the slots to avoid touching the

uninsulated tip of the probe. Some receptacles may have very loose contacts inside and you may need to sweep the probe around inside the slot to make good contact.

If any measurement falls outside the acceptable range, do not use the receptacle until the problem has been corrected. Note in particular that a zero measurement between hot leads is an extreme hazard and must be rectified, even though many campground personnel might not recognize this.

This voltage test will uncover most problems with campground electrical outlets, including the most dangerous conditions. There are some problems it will not detect, such as inadequate wire size, excessively long wire runs, or unacceptably loose contact terminals. The only sure way to discover these latter problems is through disassembly of the receptacle box, a practice frowned upon by campground management and potentially dangerous if the power supplying the box is not disconnected first. If the voltage tests pass per the above chart, but voltage inside the rig drops after connecting to shore power, you may be experiencing one of these other conditions. BCM

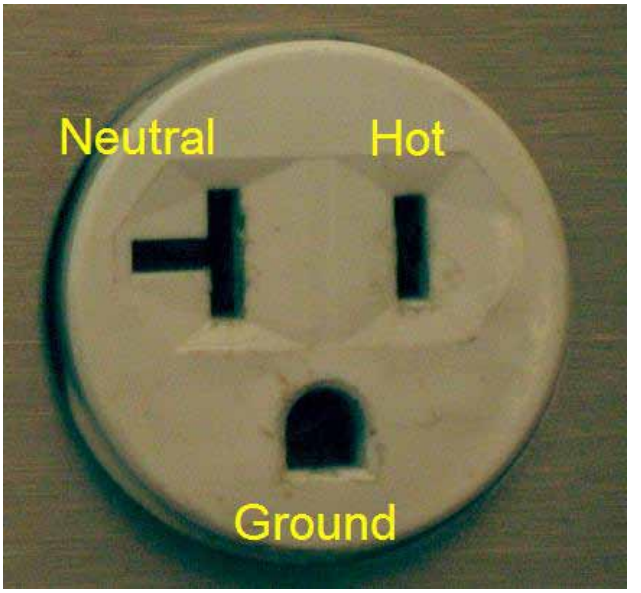


Figure 3: NEMA 5-20 receptacle.

To submit a question for consideration in the column you can email it to questions@OurOdyssey.us or send it to me in care of the magazine at:
Bus Conversion Enterprises, Inc.
135 Prater Road
Rossville, GA 30741-4688

General Exterior Inspection

The next section of the roadworthiness inspection takes only minutes and is primarily taking a good look at everything. The exterior inspection is the physical walk-around inspection where you will be looking for anything that can cause an equipment failure, or in any way make your coach unsafe. As usual, the items listed here can be done in any order convenient to you, as long as they get done.

TED BOOTHROYD, THE SAFETY GUY

Ted Boothroyd is a retired fire captain from Santa Rosa, CA. His driving teeth were cut on all types of fire apparatus. After retirement he worked for Golden Gate Transit as a transit bus driver and trainer. Now retired again, Ted is a free-lance writer of fire science and safety related topics.

I prefer to start at the driver's front corner of the rig for no particular reason. Have the engine running with all exterior lights turned on and the parking brake set. This will include headlights on high beam, running lights, four-way flashers, and fog lights if equipped. So choose your start point and end there when you have checked all the following items:

Headlights/High beam: Look at the headlights to make sure all four are lit and appear bright. A light dimmer than the others may indicate an impending failure or trouble in the electrical system. If it is possible to aim your lights on your garage door or the side of a building, check to see if all lights aim in the same direction and are level with one another. The high beams are adjusted slightly higher than the low beams. As you walk around the rig checking the lights, look also at the lenses. If they are cracked, they are due for replacement as soon as possible. If they are missing, that could be an equipment violation as the law sees it.

Emergency Flashers: Sometimes called four-way flashers, the emergency flashers should be blinking normally. If one is not, it is likely a burned out bulb. Check condition of lenses.

Fog Lights/Running lights: If your vehicle is equipped with fog lights, check them for operation as you check lighting on the front of the vehicle. Emphasis is always on quality of lighting and condition of lenses. This is a good time to begin looking at your running lights. There may be three or more on the front of the roof and scattered all around as you walk around the coach. Make sure the bulbs are working and lenses are not broken or missing.

Tail Lights: Before you actually get to the tail lights, you will be walking down one side of the rig. As you do this, check for body damage, and condition of side glass along the way. You may find loose chrome or body moldings, dings, dents, or evidence of scraping against objects like other vehicles or stationary fixtures. One of the reasons for finding this type of damage is to make you aware of possible damage to the plumbing you will rely on for the trip and also damage to storage area latches. Look for operation and condition of side running lights.

Now that you have arrived at the rear of the vehicle, you can make sure your tail lights and flashers are working. Sometimes the tail lights are housed within the same lens as the emergency flashers, and sometimes they are mounted separately. Make sure the flashers blink properly and bulbs are not burned out. The tail lights do not blink and should remain on at all times.

Brake Lights: Many people find it much less confusing and easier to check brake lights and turn signals by first turning off the emergency flashers, high beams, fog lights etc. I recommend you do what pleases you, however we'll pretend that you are going to turn off the lights that you have already checked. On your way to turn off the unnecessary lights, walk on the side of the vehicle that has not been checked yet for lights, body damage, etc.

There are two ways to check brake lights. One is to have another person stationed behind the coach to verify their operation. The second way is to back the vehicle against a building or garage door in a manner that would allow you to see the reflection on both sides as you press on the service brake pedal. In either case, the brake lights should activate with a light touch of the pedal. If they only activate under harder braking, then they are not working properly and an adjustment is in order. Part of the brake light check can be a check of the back-up lights. While a person is still stationed at the rear end, and your parking brake is still set, place the transmission lever into "reverse." The back-up lights should activate and both sides should be properly lit.

Turn Signals: The turn signal inspections is best done with two people, however you can back against a building and check the rear signals by reflection, but you will have to exit the cab twice to check the fronts. Turn each directional signal on and verify in your favorite manner that all four are working properly.

License Plates: It may not seem important to have a whole section devoted to license plates, but not checking them can lead to problems; sometimes pricey problems. During your walk around of the rig be sure to have a look at the license plates. Both license plates should be attached and readable. The rear license plate should have current tags and should be illuminated during travel in darkness. An extra problem with the rear plate is its exposure to diesel fumes and road muck. It gets dirty very easily and state troopers may pull you over just to make you wash it. Diesel fumes are oily and particularly sticky, so keep the plates clean especially during wet weather.

Miscellaneous Items: There are a few items that could have been checked as you did your walk around inspection. While at the front of the coach you can check the windshield wiper rubber. The rubber should not be cracking and should feel flexible. It is best to take care of this now if you suspect that they are old and not wiping the glass effectively.

When you are on the gas cap side of the vehicle, open the flap, remove the cap and make sure that it has a gasket seal. When you reattach it, make sure you secure it tightly. Modern vehicles may give you a "check engine" light or a trouble light of some kind, just because the gas cap is loose, or is not venting properly (it's an emissions thing). You can save the cost of a trip to the repair shop if you know this about the gas cap. Finally, you have already made a check of the body of your coach but these items are to be checked off at the end of the list. As you have seen, when you develop your own routine, you can make short work of the entire inspection.

Next month we talk about tires, and yes we can fill an entire article on the subject. Meanwhile stay safe, have fun. BCM

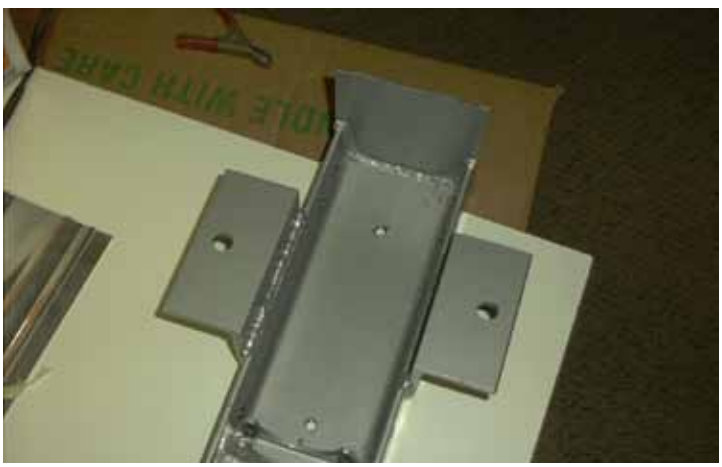
Building a Bed Slide Out

Kentucky Steve's Blog
Disclaimer: I don't have a clue what I am doing! This blog is for your entertainment only so please don't try to hold me liable for you trying something as stupid as me. Thanks.

STEVE GAINES

Bed slide out actuator and motor

Here's what I ordered for the bed slide out. It's just a stock 18 to one electric motor pushing a screw drive piston. Now to build a support sleeve to support it and keep the slide smooth and straight.

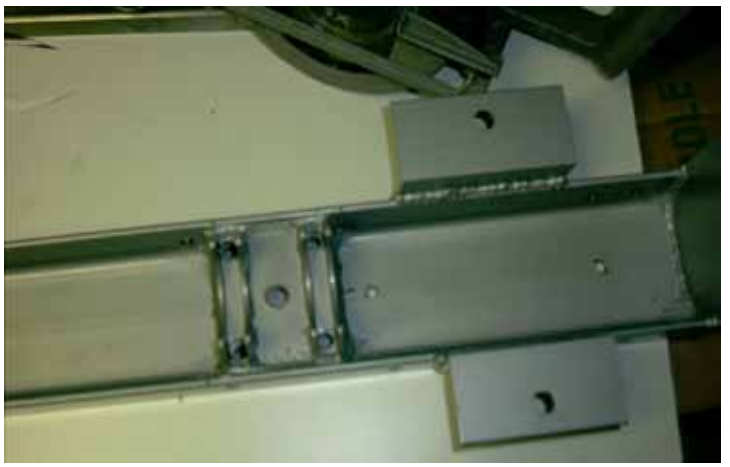


Bed slide support track

In this picture I had already completed the fabrication and rust bullet of the track. I started with a piece of 4 inch by 1 and a half by 1/4 inch channel. Then I headed off to the local automotive store to get some muffler clamps to size them to the piston. In this picture you see the plate that I welded to the end. That is to seal the end off to the weather when it's installed under the bed. The angles are 1/4 inch thick to bolt it to the bus and support the slide out center rails.

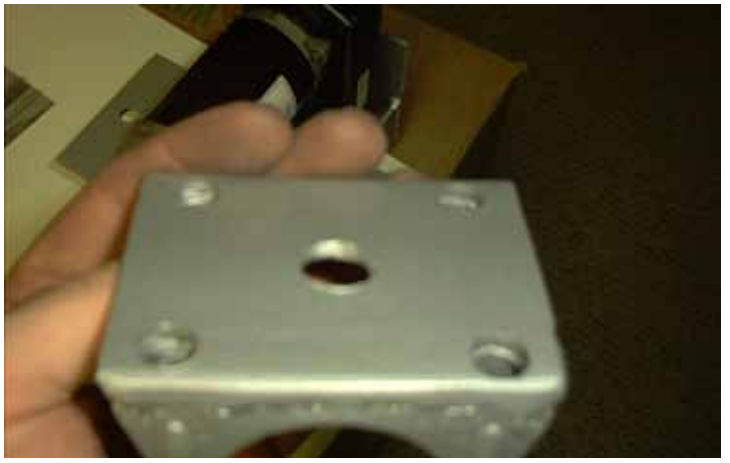
Bed slide support rail

Here's how the muffler clamps work. I welded in the nuts under the 1x1 channel before welding it into the larger channel. Then welded a support cradle (half a clamp) to the top of the 1x1 channel. Then I can use the clamp half of another one to clamp the piston end in place.



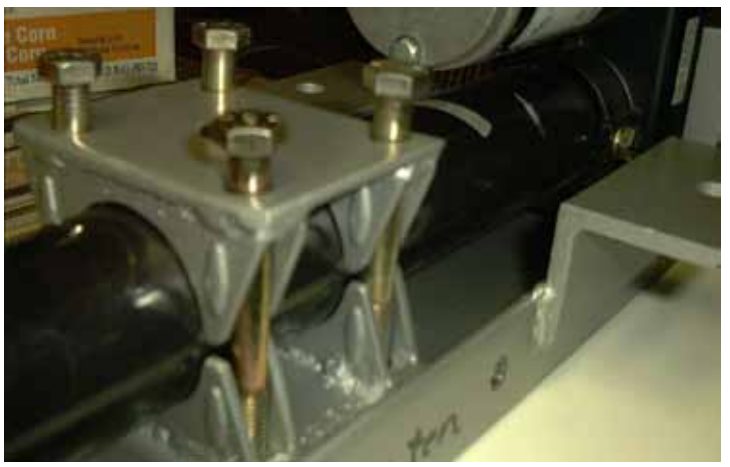
Support rail, motor end

The motor end was a little more tricky. The shaft has a couple of large pins that protrude out of it to keep it from spinning. So I wanted to clamp both sides of the pin and also use the pin for a line up to install the piston with.



Line up plate

This is a close-up of the line up plate I fabricated to clamp the piston to the channel.



Slide actuator mounting clamp assembly

This whole assembly is upside down. All in all it took about a week to fab up.

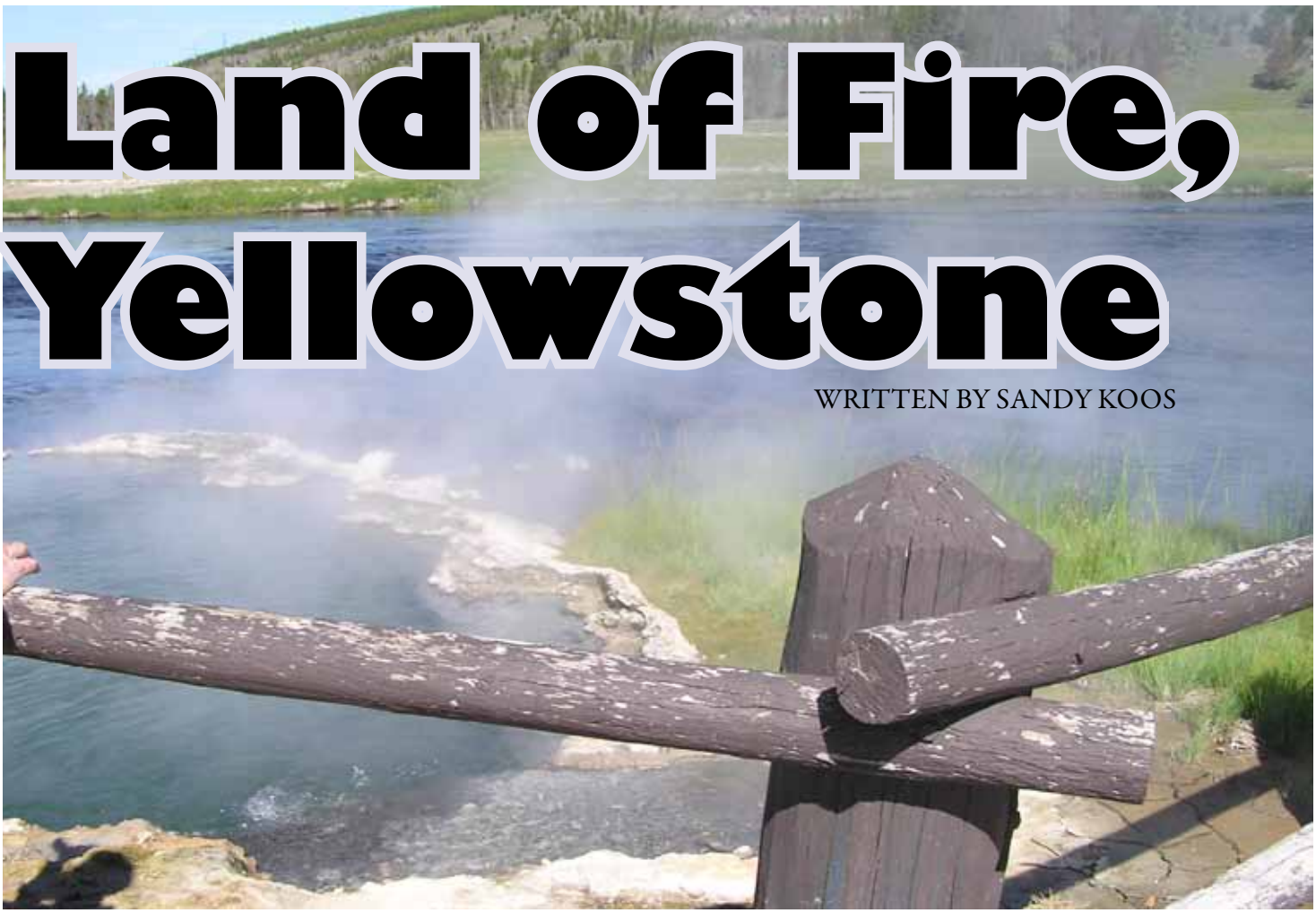
Actuator assembly, right side up

For a time line, this radius took me about 4 hours to complete. I only have simple hand tools to work with so something like this really sets the clock to ticking. Here it is finished on the front and back as well. This finished the front slide out so it was time for some rust bullet.

Join us next month as Kentucky Steve's conversion adventures continue. You can also visit his blog on-line at http://ourbusconversion.blogspot.com

Land of Fire, Yellowstone

WRITTEN BY SANDY KOOS



Last year we did the East Coast, this year we decided to stay out west and explore some national parks, Yellowstone, Teton, and Glacier to be specific. Our first stop was to be Yellowstone and we really wanted to camp inside the park.

We found a site outside West Yellowstone which is a nice little tourist town. They have an Imax which has really good movies. Next door to it is a park with rescued bears and wolves that you can see up close and personal.

There are the usual McDonald's etc. and some nice family restaurants. We found a Mexican food restaurant situated between the Imax and the Bear Experience Park. Lots of good food and reasonable prices.

If you are staying for any length of time, you might want to take the weekends off and stay home and relax. The lines were longest on Saturday and Sunday. Speed limits in the park are not much over 40 and in congested places 25, so don't expect to just zip through. You can drive your RV to 99% of the sites, but finding parking can turn out to be a chore. This year Yellowstone set a record for tourists so expect crowds.

If you are planning on doing Yellowstone any time soon, here are a few hints. Make your reservations early. We started 6 months before our planned arrival date and all the big rig sites, which are scarce inside the park, were booked. Luckily there are private RV parks in and near West Yellowstone. Not as convenient as being in the park but that's the way it goes. If you want to check on availability inside the park, your best bet is on line with the National Park Service. That site spells out where the camps are, which accommodate big rigs, and which have hook-ups.

While touring the parks, take your potty breaks when and where you find restrooms. They are few and far between and most of them have long lines. And have your jacket and/or rain coat with you. We encountered some afternoon rain showers.

You can see Yellowstone many ways. If you are a hiker, there are 1,000 miles of trails. You can bike it, go on horseback, in your car, or by one of many tour buses. If you take your RV be warned, there are many pull outs along the road, but few of them are large enough for big rigs. There is RV parking in the designated lots

but, with the exception of Old Faithful, it is limited.

We learned there are two types of park rangers in Yellowstone. The rangers without guns are there to lecture, educate and help. The rangers with guns are also there to help, but in addition, they are certified peace officers and enforce the rules within the park. Watch the speed limits which range from 45 mph to 25 mph. Speed and you will get a ticket. We saw it happen to one car which was zipping along ignoring the beauty flashing by.

Yellowstone is amazing. Established in 1872, it was the first national park in the world. 60 percent of the park is covered with lodge pole pine trees. Many areas were burned by the wildfire of 1988. The Park Service decided to let these areas reseed naturally and they are not hard to recognize. In one of the many nature seminars we learned that the pine cones are 'glued' together and when subjected to great heat, such as a forest fire, the glue is melted and the seed pods burst apart and new trees are started. The blacken trunks of the old growth tower over the smaller trees that are coming back just as thick as before.

But there is more to this park than just the trees. There are streams, rivers, meadows, riparian areas and, of course, the geysers. Everyone knows about Old Faithful but there are so many smaller ones. I was not aware of this, but there are more geysers here than in the rest of the world combined. About 2 million years ago, then 1.3 million years ago, and again 640,000 years ago there were huge volcanic eruptions. The center of the park fell in itself and formed a 30 by 45 mile caldera or basin. The volcano is still active, hence, the geysers.

But this area of seething magma about 8 miles below the earth's crust is more than just geysers. The area is dotted with steam vents called fumaroles. They are the hottest hydrothermal spots in the park.The heat boils the underground water and the steam finds fissures in the rock and forces its way to the surface rising mostly as steam. They dot the landscape in surprising numbers. There are also hot springs where superheated water rises to the surface, cools, sinks and is replaced by more hot, rising water. Mud pots are acid hot springs with very little water. Microorganisms convert hydrogen sulfide into sulfuric acid, which is ten times stronger than lemon juice. The acid breaks the rock down into clay. Various gases escape through the wet clay causing the burp, burp, burp. The smell of sulfur hangs heavy in the air.

The road leading south from Madison to Old Faithful is the best area to see these hydrothermal wonders. Well made wooden walk ways allow you easy access to all these wonders. Signs abound warning you to stay on the walks because the grey, barren ground is really just a thin crust and if you break through you may well end up in scalding hot water.

If you go, be sure to take Firehole Canyon Drive, a southbound one way loop which will take you to Firehole Falls. South of that drive is Firehole Lake Drive. It is a loop that will take you to Great Fountain Geyser,

Continued on Pg. 40

Yellowstone continued.

Firehole Lake and numerous hot pools. I really recommend these loops, but be sure to do them before you go to Old Faithful.

Old Faithful is by far the most famous of all the geysers. While the other hydrothermal attractions are out by themselves, Old Faithful is surrounded by buildings, and the parking lots will accommodate all sized RV's. There is a hotel, a post office, a ranger center and a first aid center. There is also a general store with a snack bar and an ice cream shop. If you go into the general store, be prepared to stand in line. The snack bar has a limited menu, a couple of sandwiches, a soup and snacks like chips, etc. We didn't eat there so I can't comment on the quality of the food. We packed a lunch and there are picnic areas in pretty spots along the road.

There is also a ranger station just in front of the geyser. They can tell you, push or pull 20 minutes, when Old Faithful will put on its show. A new information center is being built and should be open in late August. This center will feature exhibits on all the geysers, hot springs, mudpots and steam vents. There will be an exhibit room with a full-sized geyser model, hands on exhibits, and a theater.

A ranger is stationed there to give a history of Old Faithful and to answer questions. The biggest crowds we encountered where here. No surprise there. Don't worry about getting a front row seat. There is no such thing as a bad seat. We were back in the trees and it was still spectacular. When the water temperature reaches about 240 degrees there is a little jet of steam, a little burp of water and then the big show. Between 3700 to 8400 gallons of water and steam rise from 106 feet to 180 feet into the air. I expected something impressive but quick. I was surprised that the eruption went on for about 2 minutes, maybe a bit longer. As far back as we were, we could still feel the spray.

Don't expect to do Yellowstone in one day. There is much to see and much to do. The roads in the park form a figure 8 lying on its side. This article just covers the road from the west entrance to Madison and south to Old Faithful, which is just the upper left loop of the eight. More to come. BCM

SERVICE DIRECTORY

STERLING CLASSIFIEDS

1994 Eagle 15 - 45' American Carriage Conversion

Originally converted for football great Reggie White by American Carriage of Tehachapi, CA. It was converted from a Factory Hi-Driver Shell that was never a seated coach. Evidently he didn't use it much because it only had 14,000 miles on it when I bought it. I have put another 90K miles on it. Additional photos available on request. Will consider accepting trade-in of an older Eagle conversion.

Features and Specifications:

- **Cummins ISX 565hp Eng. (65K since new)**
- **Allison B500R Trans. w/35K on rebuild**
- 4 New tires, 4 at 80% tread remaining
- 20KW Wrico Generator (1750 hours on it)
- HWH Leveling Jacks,
- All electric
- 14' x 3' Living Room Slideout by HWH,
- OTR Heat and Air & 4 Roof Air Units
- 10 Gallon Stainless Electric Hot Water Heater
- Hurricane Hydronic Heat w/2 Comfort Hot Supplemental Heaters
- Large Sunken Shower Stall
- Microphor Toilet
- Splendide Washer/Dryer
- 6' long Hanging Closet
- Amana 21cu.ft. Side by Side Ref/Frzr
- 2 burner stove/GE Convection Microwave
- In Motion Satellite Rcvr, 20" & 13" TV's
- Kenwood DVD/CD,
- 2 VCR's
- Onkyo Tuner/Amp
- King size bed in rear,
- Sleeper sofa
- Convertible dinette.

Contact Keith
Phone: 251-443-9590
email:kaymar76@gmail.com

STERLING CLASSIFIEDS

1989 MCI 102 A3

1989 MCI 102A3 powered by 8V92 DDTA, auto trans rust free bus. The bus runs great and smoke free. Smooth sided for the new look. Has 6 foot 10 inches headroom for a great conversion coach to RV or even a limo bus. Located in southern CA. Did I mention rust free?

$15,000

562.972.2158

1997 MCI 102-D Coach

- 60 Series Detroit
- Allison Automatic Transmission
- EL front update
- Windows Skinned
- New Paint
- 3 Roof A/C's
- Ready for your conversion

$63,500

Easter's Auto & Bus Sales, Inc.
276-627-8650 or 276-629-4777
www.easterbussales.com

1967 MCI 5A

Ready to go! 35' 22,000 miles on 8V71. Jake brakes. 647 Allison automatic. Wood cabinetry. Solar panels. 100 gallon fresh water tank. 100 gallon grey water tank. New tires. Ross steering. Central heat, 7 kw Onan generator. Sleeps 6. This is a must see!

$25,000 OBO

530.299.3387

1965 GM PD 4106

Complete overhaul on 8V71 engine.
New brakes, drums, tires (front and back), air compressor, Sheppard steering, voltage regulator, gauges, air conditioner. All new wiring: 12/2 THNN wire, 2500 Trace inverter with turbo charger, Six 6 volt batteries and two 8 D starter batteries.100 gallon fresh water tank, 55 gallon gray water tank, 40 gallon black tank, 8500 BTU cat heater with thermostat control, solid oak interior, rebuilt transmission, screens on all flip-up windows, 21 foot awning.

Contact Bob and Marty Hamilton
22701 Wyman Road | Rodman, NY 13682
Phone: 315.232.5020 or 315.767.2031
e-mail mhamilton@citlink.net

1955 Scenic Cruiser

Conversion by Liberty

This bus was the June 2006 cover/centerfold feature in BCM! It has a fresh 8V71 with a 740 Allison. She is a beauty. And the professionally designed graphics suggest what you will find when you get on the road - she is a runner too. Made for a comfortable drive, this bus has cruise control, power steering, Michilin tires and all new air bags. The Scenic Cruiser is a real 50's icon, but this bus didn't get left behind in the 50's. It has been well maintained and has many modern amenities for both the trip and the destination. For example, it has 3 roof airs running good and cold, the awning is in good condition, it has a tile bath, and a fully appointed kitchen that even includes an ice maker and a blender for making great cold beverages and treats for the young of all ages. Last but not least, it features a 20KW Kubota generator to power all the comfort and fun in this all electric coach!

STERLING CLASSIFIEDS

1981 MC-9 Conversion

Low Miles!

BCM Featured Bus - May 2010

Runs and stops like new. Only 250,000 total coach miles. Only 35,000 miles since out-of-frame engine rebuild and new transmission. DD 6V92T paired with Allison 754. New brakes all around inc. linings, drums & cans.

Looks great too! Beautiful 5-coat Imron paint job. Alcoa Aluminum rims and tires with 95% tread remaining.

Other features: 10KW Powertech Genset (low hrs), Inverter w/auto transfer switch. 2-13500Btu roof airs, propane furnace, window & main awnings, sleeps 6 comfortably.

Located in Texas.
Call John at 409-886-4434

$75,000

1999 Prevost H3-45

- 60 Series Detroit
- Allison Automatic Transmission
- Raised Roof
- 2008 Front
- 5 a/c units
- Primed & ready to paint
- Southern Coach
- 1-Owner
- 60k tcm

$95,000

Easter's Auto & Bus Sales, Inc.
276-627-8650 or 276-629-4777
www.easterbussales.com

1985 Prevost XL40

Royale Conversion, 142K miles, Detroit Desiel 8V92 475 hp, auto 5 speed Allison, 325 gallon diesel capacity. 15 KW diesel generator. New first class interior. Granite, Corian counter tops, light oak cabinetry, light leather upholstery, big fridge. WebastoHW Heat, built in Cruise Aire Conditioners. All new Michelin tires.

ONLY $110,000

253.606.1256

Call owner, Burton at 253.606.1256 or
Email
nationalconcretecutting@msn.com

1963 GMC 4106 – 35'

DD 8V71N & original transmission (auto trans available). 200 gallon fuel capacity. Onan 6.5KW propane gen. Tires are in very good condition. Other features include 2 roof air conditioners, tile shower, brand new awning (installed but hasn't been used yet) and tow hitch in the back.

All cabinetry is handcrafted hardwood meticulously done by a true perfectionist. Professionally reupholstered leather driver & passenger seats. The exterior was painted by a professional in Phoenix.

Other than 3 trouble free trips around the country, this bus has been stored in our enclosed garage we built for it. Just no other way to say it, this is a GREAT bus!

$40,000

Located in Arizona. Call Bobbie at 928-472-7669

CHOO CHOO EXPRESS GARAGE

423-260-1290 423-645-7456

- **20 Years of experience with bus engines, drive trains, and other systems.**
- **Specializing in Detroit Diesel 2-stroke MUI engines.**
- **Also experienced in DD 4-stroke, Cat & Cummins engines.**
- **Shop rate $55/hour.**

Full Service Oil/Filter/Lube

$219

Includes: 1 oil filter, 2 fuel filters, 6 gallons* Chevron Delo® 40wt for 2-strokes or multi-weight for 4-strokes, check trans. & diff. fluid, brake inspection & bleed air tanks, full undercarriage inspection.
* Additional Oil: $12.95 per gallon

Located in Rossville, GA just two miles from the junction of I-24 & I-75 and Chattanooga, TN.
147 Prater Road, Rossville, GA

STERLING CLASSIFIEDS

1989 Eagle 20

2008 Conversion

NEVER USED: 14' slide-out, 470 hp DD 60 series, Allison 4-sp, 2 stage Jakes, 10 kw generator (100 hrs), 3 ducted roof A/C, bus air, sat. TV (26" flatscreen) with surround, eight 8D AGM house batteries, two 8D start batteries, propane water heater and forced air heating, Gaggenau cooktop, 165 gal. fresh tank, 165 gal. grey/black tank, Joey- bed slide in front bay, back-up camera, air ride driver's seat, Big Foot levelers, brushed stainless steel household size refrig/freezer, Microflush toilet, combo washer/dryer, GE Profile convection/microwave oven, queen island bed. Designer fabrics used throughout. Sliding shelves in galley and pantry. This coach is loaded! More photos available.

emerycrush@gmail.com or call:
(951) 333-2430
$89,000

'84 MCI MC-9 Conversion

Excellent Condition

Featured in BCM April 2005

DD 6V92T, Allison 4 speed auto transmission, Webasto hydronic heating, 2 roof airs, 8kw diesel generator, Flexsteel furniture, custom tables, rear queen bed, large bathroom, new tires/Alcoa, aluminum rims, Professional Imron paint job. Located in Arizona.

dj.hanson@comcast.net or call
253.740.2737 Carol
253.740.0639 Jim

$59,500

Move That Bus
'77 Prevost Conversion

Great 40' diesel pusher coach. New tires, new batteries. Detroit Diesel 8V71 and 6 speed manual transmission. Runs Great! Queen bed, pull out sofa bed, shower, 3-way refrigerator (110V, 12V or Propane powered). Backup camera. 6KW generator. 3 roof airs. Propane furnace (new). 100 gallon fresh water tank. 100 gallon black/grey tank.

$19,500 OBO
717-821-0541 - Dave

http://www.motorcabin.com

MotorCabins

Knotty Bus Conversions

We Have A "Vacancy"

Moose Creek Motorcabin:
MCI 9 - Knotty Pine interior, fresh engine and transmission. 6KW diesel gen set. Roof Air, This is the true hunter's dream vehicle! Come see it and drive home at $39,500.
Call Mike: 562.972.2158

Moose Creek Motor Cabins

EAGLE

This bus was put together right! In-motion satellite, Webasto heat,13KW Wrico generator, trace inverter,8 AGM batteries, 3-15KBTU Coleman Roof Airs, Vacu-flush toilet, Washer/Dryer combo, Starjet Paint. Engine has 22K miles on it trans has 5400 I had this bus set up for full timing and things didn't work out for us to go. $115,000 Call Karl @ 810-275-2221

1969 Eagle Conversion
A beautiful wide body. 8V92 rebuilt by Detroit. Wrico 15 KW diesel gen, Aqua Hot heat, 6" raised roof, driver area level with rest of coach, new tires. Health forces sale. Ohio. $75,000 937-836-3067 - Ron

1984 Eagle 41'- conversion completed in 01, 450 hp, 8V92, 14' slide-out, cherry wood interior, 10K Onan Generator, 2500W Trace Inverter, 4- 75 watt solar panels, dishwasher, w/d, Norcold 4 door fridge, water softenr, R/O system, Winegard HD satellite, new tires in 09, Very large holding tanks, many more options. No smokers/pets. Death in family forces sale. $125,000/OBO. 651-308-4230, AZ (VIN31209).

GMC

1985 Sundance Factory Conversion
On 1966 GMC 4107 - $35,000
Appraised 18 months ago at over $50K (BEFORE furniture was replaced) DD 8v71 w/30,000 miles on out of frame rebuild, 730 Allison auto. Upgrades include: new exterior paint, ceramic roof coating, one new rooftop ac, new refrigerator, new tile in the kitchen, bathroom, and shower, new captains chairs, leather couch, recovered dining chairs to match, new faucets, new b/u camera. combination gray/black tank, 10 gal. electric water heater with an engine loop, air leveling, 10KW gen, queen bed, tons of storage, center aisle bath. Pull out pantry, microwave, gas cooktop/oven, large two door refrigerator. Pull-out dining table. Call 405-376-5280 or 405-410-5280

1968 GMC Buffalo 40'– Conv. 95% complete. Runs good. 8V71 Auto. 2 basement airs.7000 watt generator. New front tires – rear good. $14,500 OBO
Call 517-676-8143 Michigan

MCI

1986 MCI Conversion DD 6V92TA/Allison Auto Trans Runs great. Onan 4000 Gen, 140 gal. fresh tank. Sep. blk & grey tanks. Full size shower. Handicap toilet, 2 queen beds, all oak cabinets LP Stove, under counter refrigerator, RV sofa folds out to 3rd bed. 2 recliners. New paint, white w/maroon accents.
Located in Payson, AZ.
Call Mike W. @ 928-978-6725

1979 MC-9 2002 Conv
DD 8V71T/Allison 740. 15KW Gen, 2 roof airs, 100gal fresh water, 120gal grey water tanks (stainless). Michelin tires on front. 4 Peninsula windows. Carpet & wood flooring. Extra clean bus. Asking $30,000. 618-793-2097 or 618-562-2097 – Located in Illinois.

2002 CONV. 1986 MCI 96A3.
Detroit 8V71 auto. Featured in June '03 issue. Sleeps 7. $105K ea. or 2 for $200K. More at www.2moms.org/buses. [pic] [0709] 903-651-1329 cell. e-mail: charles@2moms.org

'89 MCI 102C3 – This bus was never used in commercial service. It was professionally converted by Executive Motor Coach. DD 8V92TA, Auto trans, Air ride, 15 KW Diesel Gen., Webasto Htrs, Inverters, Cruise, Backup Cam, Good Tires/Alcoa Rims, OTR & Central AC's, Updated interior: Full Kitchen, Large Closet, Ceramic Shower & Vanity area, Queen Bed. Space avail. for Washer/Dryer Combo. Mechanically sound, Super Clean and in excellent condition! $75,000 228-219-8200 Jill

1988 MCI 102A3 Conversion Shell
DD 6V92T/Allison Trans. Runs Good! Renaissance rear cap, 8 new Michelin tires. Interior stripped, orig. bath & OTR AC removed, reskinned, café doors on bays – ready for conversion! Includes executive driver and copilot seats from a Monaco. Located in Las Vegas, NV. Call Gary at 702-428-2569

1978 MCI 8
Incomplete Conversion Rebuilt 8V92T with Rebuilt Allison 740. Less than 2000 miles. Wrico 13kw kubota generator with very low hours. 2 Carrier roof top a/c and 1 Duo-therm belly air. Professional cabinets in rear of bus. Roof raised 12". Spray foam insulation. Too much to list. $29,000 325-212-0807

1965 MCI 5a 35'
Purchased new by Marvin Gaye, converted by Custom Coach. DD 6V92 w/jake, Allison 740 Auto, HD radiators + extra radiator, Shepard P/S, Air Leveling, 2 propane furnaces, 3 built-in elec htrs, 2 roof air, In-motion satt., 26" flat scr TV, 50amp svc w/surge prot., 7.5KW Kubota Gen, Zantrex 2KW Inverter, New 280AH AGM batts, 100 gal waste w/macerator pump, 2dr refer, Corian counter, ceramic commode, stainless shower. $55K or poss. trade considered. Call Jerry @ 541-520-4775

PREVOST

1984 Prevost, Le Mirage
Only 157,000 Total Coach Miles!
Reduced to $99,000
Phone: 812-756-1111

1990 Prevost Liberty
Ferrari red-indigo ivory. 107,871 miles. DD8V92T 475HP w/2stg Jakes,, Allison 5-spd Trans, Prevost Air Leveling Sys, Toyo 11R24.5 tires, Alcoa Alum Wheels, 4-8D batts, Zip Dee awnings all around, Wshr/Dryr Combo, Wabasto heat, 3 Cruise Airs, OTR bus air, 12KW diesel Gen w/ 190 hrs. Outdoor elec grill & refrig/freezer, cruise ctrl, tilt wheel, 6-way leather power seat, security sys, night shades, sleeper sofa, 2 leather recliners, Conv. Micro, built-in coffee mkr, Corian Dining w/ xtra leaf, Norcold 2 Door ref., Corian counters, Marble tile floor, lots of cabinet space. Call Ken Sanderson 214-534-2049

1952 White/Beck Bus – Rare!
Original window shades. Restorable condition.
Make Offer
Call 304-536-4005, in WV

GM 4106 35' Partial Conv.
DD8V71N runs strong. Alison 4-spd manual trans. Roof caps. All but front set of side windows have been removed, skinned over and painted to match bus. Interior partially converted entertainer style w/4 bunks, 2 closets, front & rear parlors. Galley space but no equip.2 roof airs. Located in GA.$4000
Call Don weekdays at 706-891-1242

PARTS

Allison 740 Transmission
1976 Allison transmission from MCI bus behind 8v71. Ran good when we removed it in 1996. Has been stored in my shop since. $2900.00 or trade for used Motosat. Delivery possible from MT.
Phone: 406 360 4638

2 New Peninsula Conversion Windows
47-1/2" x 23-1/2" - $300
248-673-1753 in Michigan

BCM Classified Ad Pricing

Type of Advertisement	Features/Limits (text includes spaces & punctuation)	Price per Month	
		1 Month at a Time	3 Months PrePaid
Economy Text Classified	Up to 200 characters of text.	$19	$15*
Standard Classified	1 small photo and up to 200 characters of text.	$29	$25*
2XL Standard Classified	1 small photo and up to 400 characters of text.	$39	$33*
3XL Standard Classified	1 small photo and up to 600 characters of text.	$49	$40*
Sterling Classified	Format options: · One photo & up to 1000 characters of text. · Two photos (one inset on other) & up to 700 characters of text. · Two independent photos & up to 500 characters of text.	$79* (Bus or RV Sales Only)	$65* (Bus or RV Sales Only)
Sterling 2XL Classified (double size)	Format options: · Two photos & up to 1500 characters of text. · Two larger photos & up to 1000 characters of text. · Three photos & up to 500 characters of text.	$129* (Bus or RV Sales Only)	$100* (Bus or RV Sales Only)
Sterling 3XL Classified	Format options: · Two photos & up to 2500 characters of text. · Two larger photos & up to 1500 characters of text. · Three photos & up to 1000 characters of text.	$199* (Bus or RV Sales Only)	$150* (Bus or RV Sales Only)
Online Classifieds	Up to two photos & 2000 characters of text. Additional photos can be posted for an additional fee.	$19*	$15*

* Guaranteed Classifieds – If after 3 months it hasn't sold, we will provide up to 3 additional months listing at no extra cost. To qualify for the Guarantee, ad must be for a single item only. Standard Classifieds only qualify for the Guarantee if 3 months are prepaid. Contact us at 863-303-4008 to request the additional free months.

Tanks, Toilets and Systems

BUY DIRECT & SAVE! *Hundreds of Sizes to Choose From*

New Systems
Auxiliary Replacements

Heavy duty rotomolded construction.
One piece, non-corrosive high density polyethylene

STOCK #	GALLONS	L X W X D	HEAVY DUTY	LIGHT DUTY
B-302	200	60 x 36 x 24	750^{00}	N/A
B-392	170	67 x 24 x 24	655^{00}	N/A
B-300	135	76 x 28 x 16	635^{00}	N/A
B-407	135	78 x 33 x 13$^{1}/_{2}$	635^{00}	492^{00}
B-356	130	60 x 30 x 18	610^{00}	N/A
B-328	115	40 x 28 x 26	545^{00}	492^{00}
B-298	110	76 x 24 x 15	510^{00}	492^{00}
B-391	110	95 x 33 x 9	510^{00}	492^{00}
B-433	110	48 x 24$^{1}/_{2}$ x 24	510^{00}	N/A
B-427	105	39 x 26 x 26	510^{00}	492^{00}
66W	100	67 x 22 x 16	451^{00}	408^{00}
B-354	95	47 x 33 x 16	510^{00}	492^{00}
B-387	92	72 x 33 x 10	485^{00}	408^{00}
61W	75	54 x 22 x 16	465^{00}	330^{00}

Model AX308BN
Holding Tank Monitor Panel
Water Pump Switch
Size: 3.87" x 4.62"
$59^{00}

Model A-7749BN
Fresh/Gray Water Monitor
Holding Tank Monitor
L.P. Gas/Battery Monitor
Water Pump Switch
Size: 3.87" x 4.62"
$99^{00}

Model AX309BN
Fresh Water Monitor Panel
Water Pump Switch
Size: 3.87" x 4.62"
$59^{00}

Tank Monitor Panels

JRV, The Monitor System innovator now offers a single tank monitor system for everyone...RV's, Travel Trailers, Tent Trailers, Boats and Slide in Campers

- LED Electronic Graphics
- Lexan overlays in your choice of colors: white, brown or black.
- Custom colors and silk screening available
- Tank harness included with each panel
- 3.87" x 4.62" ABS bezel in your choice of colors: white, almond, brown or black

Traveler China Toilets

Dometic Sealand

All the comforts of home
Traveler china toilets provide all the comforts of home in a gravity discharge toilet for RV and bus applications. Designed to mount over a 4-bolt 3" closet flange in top of holding tank. Water connection is 1/2" MPT.

- **Freshwater operation** China bowl is rinsed with fresh water from onboard demand system. Integral anti-syphon vacuum breaker protects potable water supply.
- **Easy to clean** Durable china resists stains and scratching
- **Proven reliability an easy maintenance**

500Plus Series
TravelerLite 110

PRODUCT NO.	MODEL NO.	COLOR	SALE PRICE
621001	**Traveler Lite**	**White or Bone**	**$187^{50}**
651001	**510 Plus**	**White or Bone**	**$279^{50}**

ARDEMCO INC.
• Dealer inquiries welcome •

800-253-0115
www.ardemco.com
778 W. 17th St., Costa Mesa, CA 92627

TAKE A TRIP DOWN NOSTALGIA ROAD

$5.00 Each

Plus $2 Shipping & Handling or
Order 6 issues for just $25, Plus
$6 Shipping and Handling

Back issues of **Bus Conversions Magazine** are now available. 18 years of bus information, advice, and shared experiences can be previewed and ordered on line. Our archival library is growing weekly, so check back and see what's new.

Scanned images of the cover and table of contents of each available issue can be viewed at the BCM online store:

http://www.busconversions.com/store/

FAMILY MOTOR COACH ASSOC. COMMERCIAL MEMBER

Col. 3:23
Whatever you do,
work at it with all your heart,
as working for the Lord.