

WHAT IS INVOLVED IN COACH OWNERSHIP?

In November, 1990 we became owners of a 1987 Liberty motor home conversion Prevost. It was a 40 foot long, non-slide 8V92 powered bus, into which Liberty built a "house". It was overwhelming. The coach was complicated, it had various systems to learn. It was expensive and there were a lot of things relative to the chassis and the house that required ongoing maintenance. The good news was it was in use less than 2 years so it was practically new and not much more than grease and oil was required to keep it reliable.

At the time I was working around 12 hours a day, seven days a week when we were not using the bus so maintaining the bus by myself was not a consideration. For the first couple of years we scheduled a day or two at the Prevost Jacksonville service center when it was on Wilson Boulevard. We combined those service appointments with vacation trips to Florida from western NY. I enjoyed those days of service because owners were allowed to stand next to the mechanic to watch all work. I was soaking up as much knowledge as I could and seeing the bus up in the air was especially instructive.

Additionally, during the early years of ownership we went to the Prevost Prouds pre-FMCA rallies and at every rally Prevost provided at least one morning of seminars so between the seminars and watching the Prevost technicians service my coach I began to not only get a better understanding, I began to feel more comfortable with the coach. It wasn't as mysterious as it was when we first got it. Every new owner will tell you the amount of knowledge we have to absorb relating to the bus is overwhelming.

Sometime in early or mid 1990's Prevost moved to their current Jacksonville service center location. And Prevost changed the rules. Owners were forbidden at the time to be in the shop or to observe work being done. We had to spend time in the waiting room reading old magazines or chatting with other owners. At that point I decided I was going to maintain my own coach. By being able to attend seminars and watch technicians service my coach I felt personally responsible for its care and maintenance and was willing to start doing my own work on the bus.

Since the coach was almost new when we bought it, taking over the maintenance was not a sudden overwhelming task. The coach was in great shape, it had nothing that needed repair, and my work on it was going to initially be limited to routine maintenance. The Prevost maintenance schedule was explicit in the service intervals for the chassis. With digging I was able to learn the generator and house maintenance requirements. To help put this in perspective there was no internet Prevost web site so this became on the job training, and information gathering was a bit of a challenge compared to today. One very important point that was learned is to start with a bus that needs nothing. That fact alone made the assumption of my own work an easy transition.

I started with full chassis maintenance which was a lube, oil and filter changes, and brake adjustment. I arbitrarily chose 5000 mile intervals because Prevost had 6200 mile lube intervals and it was easier for me to track 5000 mile intervals so that is what I chose.

What I have done for maintenance and repairs since my first effort is documented in 3 log books, two of which went to the new owners of my previous coaches. But in summary I will try to recall 29 years of busted knuckles working on 3 coaches, initially on a flat barn floor in western NY, and for the last 19 years from a pit in my garage in Knoxville. There are so many maintenance tasks, so many minor repairs and so many different schedules for maintenance it is impossible to

track it in your head or to based it solely on the calendar or miles that some form of scheduling and documentation needs to be created.

It should be understood I have saved money doing work myself, but the value of what I have done has nothing to do with money. I am still learning about Prevost conversions. There is a lot I do not know, mostly because I haven't had to do a certain repair or I haven't had a certain type of breakdown. But as you will see from what follows there is a whole lot that I have done and in doing the various tasks they have become a learning experience and have significantly increased my comfort in using and driving the coach.

Over the years I estimate I have done a routine service about 80 times. That service includes changing oil, changing all filters, lubing all chassis grease fittings, checking all fluid levels plus doing a comprehensive inspection looking for signs of needed repairs such as worn air lines, adjusting brakes (manual slack adjusters only) and doing petty tasks like tightening screws on cabinet door hinges. I can do my routine maintenance, including my anal inspection of the underside of the chassis in about 6 hours. That is longer than a professional shop will require, but over the years I have added things I do and check, such as air tank draining.

I have changed coolant about 14 times, transmission fluid about 10 times (with filters), and differential fluid 3 times. I'm guessing I have changed belts at least 6 times, and changed hoses (mostly on the house) multiple times, maybe 3 times. Coolant is time consuming and at least a day is involved. The transmission service is less than 4 hours. Every two years I service the air dryer. I have replaced one air dryer that had a lazy purge valve. Most of the time the air dryer just receives a new element.

Obviously for your own coach my 5000 mile schedule might be viewed as overkill. I will not try to convince you to match my schedule, but I made a decision early on that a 5000 mile oil change was twice as often as likely needed, but if I averaged 10,000 to 15,000 miles annually my added cost was for about \$100 worth of oil and the cost of a pair of oil filters.. I was already under the bus so it was not a big deal. Compared to the approximately \$600,000 worth of depreciation spread over 29 years the added cost of some oil and filters was chump change. Keep in mind my decision is based on the fact I do my own work and do not have to go somewhere and pay others to do the work. But also understand if you choose an annual coach lube and oil change your grease fittings might not be getting the needed service.

As my coaches aged or reached certain milestones repairs and maintenance ramped up. What made it worse was for the first 10 years our first coach was doing a lot of running in the snow belt on salt covered roads. That salt on the roads corroded the bottom can on an air bag, rusted the plate on a brake chamber which lead to a failed diaphragm, and disintegrated the thin fins on the radiator. The bus operating environment will play a significant role in establishing maintenance intervals.

Continuing with work I have done over and above scheduled maintenance was brake chamber replacement and air bag replacement. Both ended up with 5 and 10 year replacement on my schedule because in both cases that is when I had my first failures. I have replaced air bags 3 times, once on each coach, and changed brake chambers about 7 times.

I have my Norgren valves on a 10 year schedule and I have replaced them 3 times. That task has gone from about 6 hours, to the approximately 12 to 14 hours I just spent on my current coach.

Age (of me) may have played a role in the increased time and effort, but it just seemed their placement and difficult access added to the time required.

My hours varied due to the coach and where it was when I did my scheduled replacement of those items but I spent about 6 hours on brake chamber replacement, about 8 hours on air bag replacement and Norgren valves ranged from 6 hours to about 14 hours as explained above.

I have replaced one radiator due to total disintegration of the thin fins between tubes due to salt on the roads. That was a day job. Related, I changed the charge air cooler on my current coach and because I work alone and have to work some things without the aid of jacks or a fork truck my CAC replacement was a 2 day ordeal, but I also changed all turbo system hoses as the same time.

I replaced 2 50DN alternators. I think the time for each was about 4 hours, but could have been more. They are heavy.

When my 8V92 showed coolant in a cylinder I opted to purchase the entire kit for an inframe remanufacture of the engine. The local Detroit dealer allowed me to work side by side with the real mechanic. It turned out the first head we removed had a small crack between two valves so all we really had to do was swap with a good head, but since the parts were in hand we did the total in frame rebuild. That took 3 days.

I changed tires every five years and batteries on the same five year schedule. I am retaining the 5 year battery schedule and it includes house, generator and chassis batteries. I am extending tire replacement schedule now to 6 or 7 years depending on if I see any evidence of sidewall cracking or aging.

I have rewelded one of my stainless steel water tanks. I have replaced 2 house water system pumps and I have added a back up water pump to my last 2 coaches. I have replaced one Raritan water heater tank. I have replaced one accumulator tank. I replaced one toilet, and when I added a small back-up water pump on the last two coaches, I also added an accumulator tank dedicated to the toilet so the small back-up pump that was added still could provide a complete flush of the Headhunter toilet. I replaced one aluminum holding tank with a stainless steel duplicate.

I have replaced 3 Cruiseairs. I have never had to add freon to any of them, and I replaced three because one was about 15 years old and the compressor locked up so I opted to replace them all.

I replaced one auxiliary compressor pressure switch and one aux compressor. I cannot tell you how many relays or lazy circuit breakers or light bulbs, or fuses I have replaced. Maybe 20 relays? with the vast majority being on the first coach. The last 2 coaches which use mostly the black cube relays have been quite reliable.

I have replaced six hub seals. I have no clue why a hub seal leaks or doesn't, but from time to time one will leak. They are a 2 to 3 hour job and cost in the vicinity of \$50 each so other than an inconvenience they are no big deal unless ignored. If ignored the leaking oil has the potential to ruin the brake shoes or pads.

I replaced all brake friction material on the first coach and two brake pads on the second coach. My guess is brake friction material is likely going to have a life in excess of 250,000 miles.

There have been many minor jobs I have done on my coaches. When I was involved in various projects or repairs I would take time to replace push in fittings with compression fittings. I have replaced countless nylon wire ties, mostly to keep something from rubbing against something else. I have painted the engine about 4 times primarily because a clean engine makes leak identifying very simple. I could simply keep the engine dry and clean using something like Simple Green, but I like a pretty engine.

In the house I have replaced 2 refrigerators in the first 2 coaches. On the XL coaches I have replaced about 6 or 8 windshields, and 2 on the XLII. I have gone years between broken windshields, but I have also broken one within a week of replacing it. I have rebonded one driver's side sliding window and replaced one due to fogging. We replaced the furniture or had it reupholstered twice. We have replaced 3 mattresses. I have replaced a couple of fans at the house heat exchangers on the Webasto system. I have NEVER replaced an injector or had to do any Webasto service on my coaches, but if I have to I am not afraid to work on them.

One satellite dish was replaced because the original one failed. I am in the process of replacing a second one because it is no longer supported and will not connect with satellites my receiver needs.

I have not yet had to replace slide seals, but that is an expense that is coming. I have no way of knowing their life, but I do know they will not last forever and they will be expensive. I can replace my own slide seals if I have to. I did have to readjust one slide pin that was not releasing.

Obviously my list above as I look at it seems daunting. It seems expensive. It paints a picture of a type of coach that is expensive to maintain. The list is intended to objectively outline maintenance and repairs that can be expected. But keep in mind this is my list, based on my tolerance (lack of tolerance) for surprises, and based on the fact the bus is a hobby and knowing I have done a reasonable job of preventive maintenance it makes the cost and time justified to me.

I throw out a lot of very good parts. I prematurely replace a lot of parts, but I would rather spend the time and money doing that than exposing myself to an unplanned repair. It needs to be understood that my scheduled replacement of air bags as an example may be overkill because there are a lot of 15 and 20 year old coaches still driving on the original air bags.

My 5 year old batteries still have a lot of life remaining when I replace them, but I prefer to not have to nurse old batteries. My point in all of this is every owner needs to understand a maintenance schedule is one that should be designed based on that owner's needs and tolerance level for surprises.

There is no defense against some needed repairs. As examples I have replaced a charge air cooler, alternators, and a radiator because they broke or failed to function properly. We all have to be prepared for those unexpected events.

But except for needed repairs scheduled maintenance is a personal thing and every owner has different standards. Adherence to a maintenance schedule such as the Prevost schedule is going to be significantly less expensive than one I have established for myself. And it may be just as good as my schedule. But there is one very important task every owner needs to do that will mitigate a lot of the cost of maintenance. Set a schedule for repairs and maintenance, in writing, stick to it,

and document everything. Record what was done or is scheduled to be done, record dates and hours or miles, record part numbers, retain receipts for parts purchased, and be detailed about everything, especially any changes to the coach.

I have made changes to all my coaches. Some to me were obvious and I just went ahead and did them. For example after changing the front air bags on my first coach I found out loosening the nut on the air bag compression fitting was almost impossible so I modified the fitting attach point by adding a long pipe nipple to bring the fitting to a point where I could easily get a wrench on it. I spoke to Prevost engineering and they agreed with my change. I added an electric solenoid operated shut off valve on the coolant line controlled by a second thermostat on the water heater. That way instead of water being heated to engine temps when heated by coolant it would only be heated to the factory thermostat set point so the risk of scalding was eliminated.

I added small back up water pumps, and as necessary added a dedicated accumulator tank so a little pump could flush a toilet. We couldn't run water in multiple places with the small pump, but we could use the coach with very little inconvenience if the primary pump failed.

I designed an inverter by-pass circuit so an inverter failure would not leave me with no way to get power to certain devices.

I completely modified how my storage bay was arranged so I could see and access all the drawers. On one coach I added a cooking grille because it did not have one. On the last two coaches I added significant lighting in the engine area so I wouldn't have to work on an engine in the dark or with the poor lighting from the engine area lights originally installed. Every owner is likely to make similar custom changes from the original design of the coach. Most do not require much expense.

A comprehensive maintenance history and log book is going to justify a much better coach selling price so some of the cost of maintenance is going to be returned. It is also going to get a coach sold more quickly. We who have been down the road of looking for a coach or trying to sell a coach know the value of a documented service history. Every seller in the world will claim the coach they are selling is well maintained and to me that is a lie unless there is proof. Buy a coach without service documentation and you are buying risk.

From the above every owner and potential owner can make an estimate of what it will cost annually to keep the coach in good repair and reliable. Every estimate will vary based on if the owner does the work, part of the work or none of the work. It will be based on where the coach is used and how it is stored when not in use. It will be based on miles driven. In other words, what it costs me to maintain my coach is not going to be the same as anyone else. But from my list of maintenance and repairs above it should be obvious a substantial amount of costs are planned and known because they reflect routine maintenance. The list of repairs is less precise because some coaches will have more stuff break or need repair, some may have less.

But no matter how the annual costs are calculated owners and potential owners need to keep firmly in mind depreciation is going to be the greatest single cost of ownership until a coach gets 20 years old or more. None of this reflects discretionary costs of ownership such as re-doing an interior, or giving the coach a new paint job, both examples adding little value to a coach.

None of the above reflects costs associated with bringing a poorly maintained coach back to a reliable condition. As an example, it can be real easy for owners to ignore the needed coolant changes. It will be impossible for anyone to measure the impact of that deficiency in maintenance. But coolant is vital, and its condition is what keeps the engine from experiencing cavitation which is a fancy word to describe the cylinder liners eroding little by little with each engine power stroke until the time the cylinder liner becomes porous and the engine suffers a catastrophic failure.

Another example of the costs associated with poor maintenance is pneumatic system issues. Ignoring air dryer maintenance and air tank draining leads to an accumulation of moisture in the brake and accessory systems. When moisture accumulates it can form a sludge in valves, and at the bottom of air tanks, it can fill air bags with water and costs to reverse the damage can easily get into five figures.

While underloved coaches can be purchased cheap, and in some instances make sense, it needs to be understood anything listed above in terms of cost is grossly understated because poor maintenance is far more expensive than good maintenance. Poor maintenance is not limited to one system or component. A coach that has not had a good maintenance history is not going to have one or two things that require attention, and more likely is going to have countless issues that will require repair. Worse, it is typical of poorly maintained coaches to have “band aid” type repairs or poor quality repairs that may take serious money to fix properly. I have heard of owners “butchering” the level low system because they did not understand it and did not want to pay for needed service or repairs. When owners modify a system usually well designed by engineers, but is a cheap attempt at a repair, the outcome is rarely good.

From the above someone might get the idea our “million mile” coaches need maintenance. And while that is true there are other considerations.

Storage is a very important part of ownership and the ideal situation is to be able to store the coach in a locked garage a few steps from the house. The storage is best if the temperatures are constant or nearly constant because as temperatures vary the coach fuel tank “breathes” and the potential to get water and algae in the fuel increases.

At the very least store the coach under a canopy to keep the sun from warming up the interior too much, and to keep the sun from damaging interior colors. If the coach has slides keeping it protected from the weather is important otherwise slide seals must remain inflated and a running auxiliary compressor is going to tend to introduce moisture to the accessory air system.

If it cannot be under cover at the very least keep it powered up so it can be provided with heat and air conditioning. In fact, regardless of its storage location it needs to have power, and 50 amp would be ideal, 30 amp would be better than nothing, but barely adequate, and 20 amp would be inadequate, especially on later model coaches with phantom loads. Keep in mind a coach stored outdoors can become a candidate for water penetration, and when moisture gets into a coach mold and mildew can become a problem. If there is the presence of mold and mildew the potential remediation could be as extensive as a total gut job. Protection from the elements is important.

When considering storage keep in mind freeze protection and protection from heat. Our coaches use materials that are bonded using adhesives like contact cement and those adhesives release in

the presence of heat. Conversely our coaches have an abundance of water lines, a water tank, and a host of devices that have water in them. Ideally the coach should be protected from freezing, but if it cannot the only option is to empty all potential places where water can be stored or trapped and then frozen. While RV house system antifreeze is a viable option it becomes difficult to insure it is everywhere it is needed and a simple oversight can leave a coach with broken water lines or components on appliances like icemakers or washers.

A coach represents a sizable investment and that investment needs to be insured. As this is being written insurance is a serious and expensive issue for coach owners. From experience I can state for certain the company providing the insurance needs to know what a Prevost bus conversion is. If you call for a quote and describe your coach as a Prevost bus conversion and the person on the other end of the line knows exactly what you are talking about you are likely to be way ahead. If the insurance company or agent needs an explanation it might be a safe bet that if your need insurance coverage after an incident you are going to spend a lot of time trying to get your problem covered. Our buses are not RV's, they are not going to be repaired at the nearest Camping World or RV dealer and some repairs may require both Prevost and the coach converter to participate in the repairs.

There are two types of insurance coverage. One is defined by the industry as ACV (actual cash value) and the other type is Agreed Value. The difference is substantial. If you have an ACV policy it is the insurance company that determines how big the check is going to be if you have a total loss. It is a secret right until they send you the check and if you are unhappy with their opinion of the coach value you can expect a long and expensive fight, usually with lawyers involved.

The second type is usually going to have a little more expensive premiums, but it is a value you and the insurance company agree you will be paid in the event of a total loss. Your proof of the value is a recent bill of sale, or an appraisal of the value of the coach by an appraisal company familiar with bus conversions. An appraisal might cost around \$300.

If you want cheap insurance go to the agent that writes insurance for your home and cars and maybe your business and put the muscle on him to provide insurance for your coach. But bear in mind while the price may seem inexpensive you may not be adequately covered. Companies that are experts in insuring bus conversions very clearly understand their robust construction and that even simple paint repairs can easily get into 5 figures.

Am I not just a bundle of joy trying to point out all that is involved in Prevost bus conversion ownership?

Like a second home, or airplane ownership, or the cost of owning and maintaining a boat of similar size and quality our coaches are not inexpensive to own or maintain. But there is nothing out there that has such an enjoyable lifestyle. We all worked hard and when it is time to enjoy the fruits of our labors our coaches fulfill our needs better than almost anything.

I have found that with little or no experience owners who are willing to take the time can own and manage Prevost conversion easily, they can do a lot of repairs using simple tools, they learn to tap into the collected knowledge of other owners such as by joining groups like Prevost Community. They can keep costs down by taking advantage of discount programs. They can

avoid expenses and inconvenience by being pro-active in their maintenance program, and best of all the more they use their coach the less expensive it is to use.

One last point. How much fuel does a coach use. That is like asking how high is up, but the fuel consumption is going to fall within a certain range. If you drive fast (70 MPH) and are pulling a heavy trailer or toad, and you are in mountainous or hilly terrain 4 MPG is a reasonable number, less if you have an 8V92.

If you have a pre-EGR Series 60 12.7L engine in a mid to late 1990's non-slide coach and you drive slow like an old lady (or like me) you could see as much as 8 MPG, even with Over the Road heat and A/C, towing a heavy car on flat terrain. If you have a later model 14.0L coach, with or without an EGR, or a Volvo engine coach you can expect to get as high as 6.5 MPG, but usually lower dependent on speed, weight of toad and terrain. So many things affect fuel consumption you just have to accept what you get based on your speed, what you tow, terrain, type of engine, and external conditions such as headwinds.

As new owners develop experience they also develop contact lists of other owners with their type of conversion, companies that provide support for their coach, and they learn how to access information via the internet. It is not as scary as this article might make it sound.