

## **Medium Duty Truck (MDT) or Heavy Duty Truck (HDT)**

*by Jack and Danielle Mayer*

### **The Mayer's Volvo tractor truck**

Our route to ownership of a converted tractor, like many people, was long and involved unnecessary expense. When we decided that it was time to full-time, we started looking for a 5th wheel and a truck to pull it. We had been RVers for many years, having owned both motorhomes, and trailers (tag-alongs).

We knew we wanted a 5th wheel, so at least that decision was made. Our choice of a 5th wheel over a motorhome was based on our travel style. We usually go someplace we are interested in, and stay there exploring the area for anywhere from 3 days to weeks/months.

Since we would not be moving as often as others do, a 5th wheel offered: better livability, better storage than a comparable motorhome, easier maintenance (no engine /drive train), and better value for the dollar spent.

Our strategy was to find the 5er we wanted, and to then buy a truck that was capable of pulling it. We were familiar with trucks, and with weight issues, since we have owned horses and a hobby farm most of our lives. Plus, Danielle's career was in the heavy trucking industry, in the safety area - accident prevention and mitigation. So we were acutely aware that people pull trailers with trucks that are overloaded. We were determined not to be one of them.

### **First truck**

Jack's original intent was to restrict our trailer length to 30 feet - with a trailer this size we could fit into most parks, we could use an F350-class truck, and a trailer that size seemed gigantic compared to our 25 foot vacation unit.

After looking for a while, reality hit. This was going to be our home, and trailers in this category did not have the amenities, storage and net cargo-carrying capacity we needed for our toys.

To make a long story short(er) we finally settled on our initial rig - a Newmar Kountry Star. Its Gross Vehicle Weight Rating (GVWR) was 16,250 pounds with about 3700 pounds NCC, as delivered to us. It was fully loaded, so we were really pulling the full 16,250 lbs. Once we selected this trailer, we knew we would not be able to safely pull it with an F-350. Research led us to the new (at the time) F450/550, which was rated at 26,000 pounds GCWR. We thought this was enough truck for all our future needs. We were wrong.

We were very satisfied with the way the F550 XLT 4x4 crew cab handled the Kountry Star's weight. It stopped well with its large, four-wheel disc brakes, and pulled the big hills about like you would expect - slowly.

The biggest problem was that the truck was not really designed to be a high performance tow vehicle. Thus we added, as most people do, thousands of dollars of upgrades to make it a more competent and comfortable tow vehicle.

This truck served us well for over 3 years of full-time RVing. But by then we realized that our next trailer would definitely be heavier (although not necessarily longer) than the Kountry Star - probably 19,000+ pounds. after loading all our toys. We knew we needed a different tow vehicle for this kind of weight, and to competently handle the hills of the West.

## Medium duty trucks

We started looking at medium duty trucks in late 2001. We looked, and looked and drove. We searched for the best bed, searched for the best deal. We evaluated all the technical specs and finally settled on an International, with 275 hp (or 300) and a Stalick bed. This is a very nice truck, with lots of storage. It drives pretty well too. But it costs a lot!

Even used trucks, with the items we wanted on them, ran around \$60K. It turns out they really did not perform much better than our F550, although the exhaust brakes do work better than what we had on the 550. For additional information on MDT's, search the Internet for Medium Duty Trucks and look at Mark and Dale Bruss' page about their Red Rover the Truck.

## A Step Up to a HDT Tractor

While we were full-time RVing, Danielle took on a temporary consulting engagement for a very large trucking company in Lakeland, FL. I would drive her to work and pick her up. While waiting for her at the Lakeland headquarters/terminal I would watch the Volvo tractors come and go.



Why not use one of these tractors to tow with?

We had not really seen many converted tractors towing RVs at that time, and most of the ones we did see were real old and rather disreputable looking. But these Volvos were real nice 610s with aero sleepers. So the research and search for a tractor started, slowly, and that eventually brought us to Larry Zeigler, back in his early days of selling conversions.

By that time we pretty much knew what we wanted in a tractor, but were not at all confident that we could find a good one on our own. We really did not know enough about them and buying a used tractor requires at least basic knowledge of the heavy truck market.

Our "non-negotiable" requirements for our tractor were: At least 400 horse power, auto-shift, not a dark color - white preferred, full fairings (tank, vertical). Other than that, we were open. It took about a year to find our tractor, but we were not in a hurry.

## Pros and Cons of an HDT

I want to stress that a Class 8 converted tractor is not a tow vehicle for everyone. We love ours, but we do understand why others would prefer a MDT. Here is our view of the pros and cons (read tradeoffs) of each, in no particular order. These are things to consider in your own decision-making.

**Size:** The MDT does feel more like a pickup. While the tractor looks huge, most of them are not substantially bigger than a MDT - it is just a lot taller. Neither a MDT nor a tractor is going to fit in the compact car slot. I park in the same areas I did with my F-550 which also did not fit in normal parking spots.

The major disadvantage of a tractor is the height. We are 10'10" and that CAN limit where you go, although it has not affected us. You do watch the trees along the road, though. If you get a full height tractor, like a Volvo 770 you will have to be even more careful - they are 13 feet plus. Our Volvo is our daily driver and it truly is not a problem.

Our Volvo 610 is 11 inches higher at the cab floor than an International MDT. You really do have to climb into them. If you have bad hips, knees, or other problems, this is not a truck for you. You will be far better off with an MDT. There isn't really a way around this - it is just a big truck. On the plus side, you are sitting higher than a MDT and visibility forward is better.

**Usability:** There is no 4-door option on a tractor, and no seats in the back. You can add two or three air suspension seats, if you rip out the bed and storage compartments. Or you can add a jackknife couch on top of the storage compartments. A jackknife couch can enable carrying up to four additional people, with their own seatbelts.

If you want to carry lots of people around (in their own seats), you will have to modify the tractor. So what do you do with groceries? Dedicate one of the side storage compartments in the tractor to them. There is lots of space and easier access than on our F550.

Personally, we like the sleeper. It is very comfortable and it is easy to add pillows or a bolster to the bed so you can use it like a couch. When out for the day the sleeper is easy to take a nap in, or sit and read for a while. The condo has its own separate heating and air conditioning, so as long as you are high-idling the truck, you have climate control. It is easy to set these trucks up so you can overnight in them. Our truck has shore power, refrigerator, microwave, porta-pottie, two beds and an inverter in it. It is quite comfortable for several days, as long as the temperature is reasonable outside.

Another usability consideration is the transmission. You can easily put a full automatic in an MDT. The Allison 3060/3066 automatic transmissions typically found in an MDT are really nice and work well. There are two types of automated transmissions you can find in a used tractor. Both of them use computer controlled servos to automatically shift the manual transmission.

With an Autoshift you have a clutch that you only use when starting out or coming to a full stop. After that it shifts like an automatic. An autoshift is a nice transmission, but it is NOT fully automated. There are also fully automated transmissions starting to appear on the used market. The ArvinMeritor Freedomline transmission and the Eaton Ultrashift transmission both eliminate the clutch pedal. They are fully automated transmissions, under control of the trucks transmission and ECM computers. Like the autoshift, they use servos to shift - there is no torque converter.

If your tractor has a manual transmission you need to learn to double clutch, and/or to float shift. Floating a shift (shifting by matching rpm and not using the clutch at all) is not that difficult to learn for most people, but it does take practice and is TOTALLY different than driving a standard transmission in a car.

**Visibility:** the tractor has limited rearward visibility, and limited side visibility - there are definitely more blind spots than with a MDT. You have a sleeper without windows back there. A MDT has glass all around like a pickup. Visibility is unarguably better in a MDT. You can add side windows to the tractor and this would help. For rearward visibility we added a backup camera. This totally resolves the rear blind spot issue. Trailer hookup turns out not to be a problem. We can easily hook up without the camera, but the camera makes it quicker.

**Price:** The tractor is considerably cheaper (at anywhere from \$26K-\$45K), even if you pay someone to convert it for you. You should probably plan on adding \$4-5000 of goodies (including the hitch) to the tractor. If you want to add a hauler bed, figure on \$8-12,000 for a nice bed with at least 4 side compartments. A more basic bed would be less. A comparable MDT will be in the \$60,000 range. Yes, I know you can find them cheaper, but I'm talking comparable. I've heard the arguments that you can find a nice MDT for \$15-20K. I'm not talking about those trucks, just like I'm not talking about a class 8 that you can find for \$8-12K.

**Comfort:** There is just no comparison. A tractor is designed for a driver to live in for weeks, if not months, at a time. A MDT is designed to be a city or regional delivery truck. The driver goes home at night. The MDT up fitters do a very good job fixing them up for RV use, but it is still not the same.

The tractor ride is superior to a MDT. It is quieter - much quieter. There are less wind noises and less engine noise. In my opinion, it is easier to drive - it tracks on the road better than the MDTs I have driven (Int. 4700, FL60, FL70, Ford Supercruiser/F650 - I have not driven the M2 FL's). And it has at least as many, if not more, creature comforts than all but the most exotic MDT.

**Performance:** The MDT accelerates much better than a tractor. It is quicker off the line, so it is much more pickup-like than a tractor. Any MDT with an automatic will leave even a 500hp tractor in its dust. Other than that, a tractor will outperform a MDT in all categories - it brakes better, it has more power, and it will climb hills so much better it is not even in the same category. A MDT will not climb hills any better than our F-550 did. Now, I'm not a speed demon, but it is nice to be able to cruise hills at the speed limit, if you choose to. Basically, even the heaviest 5er can be pulled up even the biggest hills in the west on cruise at 60-65 (assuming no traffic slows you down).

Most MDTs have as much or more wheel-cut than most tractors, so they will usually turn a little tighter, depending on wheelbase. But the Volvos do turn real well; so much better than my F-550 that I am real happy with its maneuverability. Other tractors may not turn as well. The Volvo has a 50 degree wheel cut, for example, while a T2000 only has 45 degrees. It is something you have to watch out for.

**Economy:** Fuel mileage will be dependent on how much weight is being hauled. In general, it will be in the same range as an MDT hauling the same weight. Our Volvo 610 with 400hp/1450 torque averaged 10.3 mpg at the 34K lb. weight, and now averages 9.2 mpg at the 44K pound. weight (double towing a Jeep, and with a heavier trailer). The best mpg bobtail I ever obtained was 13.6 mpg for a 1650-mile trip. Normally, I get in the low 12's running around town. Interestingly, the higher hp/torque tractors hauling the same weights as we do get about the same mpg.

## Our Decision



All these factors need to be considered in your comparisons between the two types of trucks. In our case we decided that the tractor was the way to go - we did not need the back seat and 4-doors, which to us was the major benefit of the MDT. The comfort, safety and power of the tractor - along with the price - were the factors that led us to settle on the class 8 conversion. Consider the tradeoffs carefully. The MDTs make nice haulers and they may be a better choice for your situation.

Sometimes we are asked that if money was not a factor, and we could have anything we wanted, what we would do. We both agree that we would buy a new class 8 tractor, with everything in it, and convert it for RV use. The only disagreement is what tractor - Danielle would choose a new Volvo 630 (the 610 replacement). I would choose a Volvo 730, which has the condo length of the Volvo 770 (77?) but the height of a 630, the best of both, in my opinion. Both of us would put one of the new fully automated transmissions (no clutch at all) in our trucks.



*Guest contributors Jack and Danielle Mayer have been full-time RVers since 2000. They host [Living the Fulltime RV Lifestyle](#) where they go into detail about heavy duty trucks and other technical issues. If you are even thinking about purchasing a heavy duty truck, go to their website for more technical articles on what to look for, registering it and more. Photos also by the Mayers. They also recommend the [Escapees forum](#) on heavy duty trucks for more information.*