



# Initial Operator Reaction to the Volvo D-13 Engine

*by Larry Plachno*  
*Photos courtesy of Prevost*  
*unless otherwise indicated*

**Engine availability for intercity coaches has turned into a game of musical chairs in recent months as old names opt out of the market and new ones appear. Hence, there has been a great deal of interest in the new Volvo D-13 engine. It is now available in Prevost coaches as well as the Volvo 9700, shown here, that is being sold and supported by Prevost.**

**A**s many readers know, 2010 will be a watershed year for the bus industry as we move to the new EPA-mandated 2010 engines and probably switch from EGR to SCR. Over the past year we have run several articles on the forthcoming 2010 engines as we have received new information. To some extent, the emerging situation reminds me of the old parlor game of "musical chairs."

First, Detroit Diesel opted to limit sales after 2010 to manufacturing members of the Daimler family (Orion and Setra as far as we are concerned). Next, in spite of their recent

strong activity in the bus industry, Caterpillar decided to leave the heavy-duty, on-road market entirely. The latest development is that Cummins has decided to go SCR for 2010. This means that all three engines currently confirmed for 2010 (Detroit Diesel, Cummins and Volvo) will be SCR.

While the 2010 line-up of available bus engines is far from finalized, we know that there will be some changes. It is increasingly obvious that bus owners will have fewer engines to select from. Today, two different manufacturers offer your choice of three

engines and two transmissions, a cornucopia of alternatives that will probably not continue beyond 2010. More likely, we will be faced with the more limited choices of the past. If you purchased a GM coach, you got a Detroit Diesel engine, and if you purchased a Mack Truck, you got a Mack engine.

The Volvo D-13 engine is the newcomer to our market. In October of 2007 at the Bus World show in Europe, Volvo announced that its engine would soon be available on North American buses. In early 2008, Prevost began to offer the Volvo engine on its X3-45 and "H" series coaches. While

unknown in our U.S. and Canadian bus industry, the Volvo engine has been popular in Europe for decades and has been available on North American trucks for years.

An in-line six-cylinder, four-cycle diesel engine, the D-13 is assembled at the recently-improved Volvo engine facility in Hagerstown, Maryland. Offered as an EGR engine in 2008 and 2009, it will change to an SCR engine in 2010. In addition to being offered on Prevost's own coaches, the D-13 engine will also be installed on the Volvo 9700 coaches that Prevost will start selling in 2009. One of the most impressive features of the D-13 engine is the fact that it will be supported and serviced by Prevost's own highly-praised network, a situation not typical with other bus engines.

On the one hand, the Volvo D-13 engine in coaches is still very new. At the time of our research, no company had yet reached a year of experience with it and most had only a few months experience. On the other hand, with Caterpillar out for 2010 and availability of the Detroit Diesel engine limited, more and more readers have been asking for information on the D-13 so they can evaluate it as a possible engine for their fleet. With this thought in mind, we contacted six upscale operators who had some experience with the new D-13 engine in their fleet to get their initial reaction to the engine.

### Six Operators

Since the D-13 engine was relatively new our choices of operators was somewhat limited. However, we tried our best to get well-rounded representation. These operations

**Chartrand is based in the Montreal area and operates more than 100 vehicles. The company took delivery of six new Prevost H3-45 coaches in mid-2008. All of them were delivered with the new Volvo D-13 engine. AUTOCAR CHARTRAND.**



**Orion Pacific in Orange, California has been a Prevost owner since 1999. Brad Hunter has purchased six new Prevosts in recent months and has another three on order for delivery in April of 2009. All of these new coaches are equipped with the Volvo D-13 engine. ORION PACIFIC.**

included one in the Los Angeles metroplex as well as another in rural Massachusetts. Four are in the United States and two are in Canada. One is well known for scheduled service, another does a lot of local service and others are typical charter and tour operators. In addition, our group of operators includes numerous geographic and weather differences from the hot and mountainous Southwest United States to the cooler areas in Canada. Here is a list of the six companies followed by their reaction to several different aspects of the D-13 engine.

**Brad Hunter at Orion Pacific in Orange, California** - Originally from Brisbane, Australia, Brad Hunter and his wife founded Orion Pacific in 1985. He purchased his first Prevost in 1999 and his fleet today is mainly Prevost. He recently purchased six coaches with the D-13 engine and has three more on

order for delivery in the first half of 2009. Orion Pacific serves a major metropolitan area and operates through much of the Western states.

**Barry Stevens at Dreamers Travel in Phoenix, Arizona** - Dreamer's Travel operates a fleet of late model, full-size coaches. The company provides transportation for meetings, conventions, local and over-the-road touring services. At the time of our inquiry, the company operated one new Prevost with the D-13 engine. An affiliated company, All Coach and Truck Repair provides service to other coach owners.

**Richard Dupree at Regent Coach Line in San Antonio** - Based in Texas, Regent Coach Line operates a fleet of 23 coaches. Six are new H3-45 models with the D-13 engine. Primarily serving the San Antonio and Austin areas, Regent works closely with destination management companies in San Antonio and offers a wide range of services from local transfers to shuttles, day trips, charters, and tours.

**Peter Wilson at Wilson Bus Lines in East Templeton, Massachusetts** - Wilson is a fourth-generation company with a history going back more than 75 years. Located 60 miles west of Boston, the company operates nearly 30 vehicles, mainly Prevosts, including two new X3-45 coaches with the D-13 engine. In addition to being an old friend, Wilson is very knowledgeable with buses and has operated articulated Eagles and the sole PD4901.

**Eric Chartrand at Autobus Chartrand in Laval, Quebec** - Autobus Chartrand operates a very diverse fleet including full-size coaches, minibuses, and school buses. Service is provided both locally as well as into the United States. The company took delivery of six new Prevost coaches in July of 2008 that are equipped with the new Volvo D-13 engine.

**Louis Gagne at Orleans Express in Montréal** - Based in a major metropolitan area, Orleans Express is best known as a major intercity scheduled service operator. Routes operate from Montréal to the Gaspé Peninsula through Trois-Rivières, Québec City and the Bas-Saint-Laurent region. The company has a staff of approximately 500, transports 1.7 million people annually, carries nearly a million packages annually and even provides a long distance messenger service known as Expedibus.

### Driver Acceptance

Most of the operators reported a positive reaction from drivers although one operator in a northern climate had concerns over whether an auxiliary heater might be needed in the cooler winter months.

Peter Wilson said that his drivers like the Volvo engines. He added that the Prevost independent suspension also pleased them. Drivers at Dreamer's Travel like the new D-13 engine and have commented that it is very quiet. Richard Dupree from Regent Coach Lines said that his drivers love the new Volvo D-13 engine.

Brad Hunter from Orion Pacific has coaches assigned to specific drivers with several drivers being with him for more than 10 years. He said that his driver reaction was "over the roof." The D-13 has more than enough power and good pulling power.

Louis Gagne at Orleans Express indicated that his drivers found no significant difference between the Volvo D-13 and previous engines. Eric Chartrand noted

Wilson Bus Lines had typically purchased the H3-45 model in the past. However, in 2008 Peter Wilson elected to buy two new X3-45 coaches with the new Volvo D-13 engine. Located in northern Massachusetts, Wilson Bus Lines has been operating Prevost coaches since 1999.



Although new in American intercity coaches, the Volvo D-13 engine has been used in European buses and American trucks for years. This in-line six-cylinder, four-cycle diesel engine has a reputation for economy and quiet operation. It became available on Prevost coaches in 2008 and will be available on the Volvo 9700 when sales start in 2009.

that his drivers really like the new D-13 engine. Their only concern is whether the engine will throw off enough heat in the winter.

### Mechanics/Service Staff

The mechanical and service staff at the companies interviewed were very positive about the D-13 engine. Some specifically commented that the D-13 used little or no

oil, did not leak, and required less attention than other engines.

At Regent Coach Lines, the garage and service staff were very pleased with their new Volvo D-13 engines. They said that the engines were easy to get to and easy to work on. The maintenance staff at Dreamer's Travel in Phoenix love the new Volvo engine. Their reasons: it does not leak oil, it does not blow oil, and has no real oil consumption. With the new system they can extend the oil change intervals. Eric Chartrand reports that his mechanical staff likes the D-13 engine. All they do is change the oil and the engines continue to run well.

Brad Hunter related that he has not received a reaction from his garage staff on the D-13 engines. There was no problem with introducing this new engine into his fleet and the engines are easy to work on. Brad further commented that he personally liked the new particulate filter system because it makes his company look green.

### Fuel Economy

Almost all of the companies contacted indicated an improvement in fuel economy with the D-13 engine.

Peter Wilson reported that while Wilson Bus Lines normally runs "H" series Prevosts, in June he took delivery of two X3-45 coaches with the Volvo D-13 engine. Instead of the standard rear end ratio of 4.10 he went with a 3.90 ratio. These two coaches have been running at more than seven miles per gallon. This is compared to non-EGR Series

60 engines whereas the EGR version Series 60 engines are getting one mile per gallon less.

Brad Hunter from Orion Pacific said that his "fuel economy is excellent." He says that he is getting about 3/4 mile more per gallon on the D-13 engine than on the Series 60. He remarked that he has been so happy with his new buses that he just ordered three more new Prevosts with the D-13 engine.

Barry Stevens from Phoenix said that while he only has one coach with the D-13 engine he is pleased with it. He has put 36,000 miles on the 45-foot coach with an Allison transmission and it is running at seven miles per gallon or better. Barry admitted he he was "a Detroit Man" but is very impressed with the Volvo engine.

Richard Dupree of Regent Coach Lines had an interesting story to tell. He operated one MCI "E," two MCI "J's," and 15 Van Hool T2145 coaches. He elected to buy six new Prevost H3-45 coaches with the new Volvo engines. Both his drivers and mechanics are pleased with the coach. He is currently getting six miles per gallon on local tours in San Antonio with his Allison transmissions and expects to get even better fuel consumption when he puts the coaches out on over-the-road interstate charters.

Eric Chartrand of Autocar Chartrand in Quebec took delivery of six new coaches with the D-13 engine in July of 2008. He remarks that fuel economy with his new D-13 engines is 10 percent better than his 2005 Series 60 engines. Louis Gagne of Orleans



Regent Coach Line is based in San Antonio, Texas and operates a fleet of 23 motorcoaches. One of the first Prevost customers to get the new D-13 engine, Regent took delivery of six new H3-45 coaches in 2008. Regent Coach Lines uses the coaches in a wide variety of services.

Express said that his new Volvo D-13 engines provide three to four percent better fuel economy than his previous engines. They have enough power and are less noisy when operating.

#### Power and Torque

Does the increased fuel economy of the D-13 engine indicate that it has less power and torque? Not so, say the responding companies who seem to be more than pleased with the D-13 in this area.

At Dreamer's Travel, Barry Stevens mentions that the low end torque on the D-13 engine is phenomenal. He says that he can feel the torque as the engine spools up just above idle. He continues that the power load on the engine is really good. His experience is that the engine has no noticeable oil consumption and does not blow oil. Stevens says that he used to love Series 60 engines. He maintains that they were the first engine he did not have to fiddle with. However, he is now sold on the Volvo D-13. Barry says that he can get into this thing, it sets up nicely, and works well with the Allison transmission – with no jerks. He says that he recommends the D-13.

Richard Dupree from Regent Coach Lines says that he is getting plenty of power from the D-13 engine. He said that he and his staff are happy with the buses. The 430 horsepower D-13 engine has "a lot of power" according to Peter Wilson. He also credits the engine with having "a lot of torque at the low end."

At Autocar Chartrand, Eric Chartrand said that the D-13 engine has more torque than other engines and provides more than enough power. He particularly likes the new technology with a "green" engine, no pollution and the satellite GPS data com system that sends information back to him. He said that he certainly would order more D-13 engines in the future.

#### Quietness

What came as a substantial surprise to us is that almost all of the operators we spoke with praised the Volvo D-13 for its quiet operation – an attribute not normally asso-

The D-13 engine is assembled in the recently-improved Volvo engine facility in Hagerstown, Maryland. One of the things that makes the engine unusual is that it is supported by the coach manufacturer. The D-13 is an EGR engine in 2009 but will go to SCR technology for the new 2010 regulations.



ciated with heavy-duty, on-road diesel engines.

Peter Wilson reports that the Volvo D-13 engine is obviously quieter than engines he has run in the past. He said that the quietness is noticeable both outside as well as inside the coaches. Orion Pacific customers like the new buses but also commented that they are both quieter and smoother in operation.

Barry Stevens at Dreamer's Travel mentioned that quietness was a major attribute of the D-13 engine. Richard Dupree makes a similar comment about the quietness of the engine. His previous coaches were equipped with the Cummins M-11 and Detroit Diesel Series 60 engines. Eric Chartrand also commented that the Volvo D-13 engine is very quiet in operation.

### Support

Most of the operators indicated that they had not had much need for support on the D-13 engine. Those that looked for help said that they were pleased with the support provided by Prevest.

Peter Wilson praised the support system calling it "like On-Star." He also mentioned that the extended warranty on the engine covers more than on other engines. "Prevest is doing a great job," said Barry Stevens from Dreamer's Travel. Richard Dupree said that they have only had one minor problem. However, Prevest quickly stepped in and took care of a new cam assembly.

Perhaps the only negative reaction on service came from Louis Gagne at Orleans Express. He said that he is concerned because Volvo is not well established in his province with service centers.

### Conclusion

Due to the fact the Volvo D-13 engine is still new in buses, all of the people we spoke with had only a few month's experience with it. However, there were some obvious conclusions for those readers considering purchasing the Volvo D-13 engine in the future.

- Drivers were either pleased with the engine or at least noticed nothing different than previous engines.
- Mechanical, garage and service staffs were generally pleased with the D-13 because it seemed to require less attention than other engines. Several people noted that it the D-13 used little or no oil and did not blow or leak oil.
- Almost every operator we spoke with noted measurable fuel consumption improvements with the D-13 over comparable engines from other manufacturers.
- All of the operators who talked about power mentioned that the power put out by



Orion Pacific was founded by Brad Hunter from Brisbane, Australia, and his wife in 1985. Based in Orange, California in the Los Angeles Metroplex, Orion Pacific has a staff of 23 and operates through the western United States. They currently operate six Prevest H3-45 coaches with the D-13 engine and have three more scheduled for delivery in April of 2009. ORION PACIFIC.

the D-13 was more than adequate and the torque was impressive, even at low rpms.

- Although not originally expected, almost all of the operators mentioned that the D-13 was surprisingly quiet in operation.
- The operators typically gave Prevest a good report card on service. One operator mentioned that Prevest did an excel-

lent job on taking care of a minor problem that developed. The only negative came from one operator who was concerned about the lack of Volvo Support Centers in his area.

- Many of the operators we spoke with indicated that they would buy more coaches powered by D-13 engines in the future. □

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