

Owner-Operator Fuel Economy

How do you compare?

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1.0 Introduction

Between December 15, 2010 and February 15, 2011, the Owner-Operator's Business Association of Canada (OBAC) and Ray Barton Associates Ltd. conducted a survey of owner-operators as part of a review of trucking costs in Canada. This report provides results on the fuel economy and truck type information that was collected as part of that survey.

The results presented should be useful for owner-operators who wish to benchmark their fuel economy and truck characteristics to other owner-operators. In other words, how do you compare? Is your fuel economy in line with the others or does it look like there is room for improvement in your operation?

2.0 Fuel Economy Results

Because they tend to carry lighter loads, dry van and refrigerated trailer combinations show better fuel economy, averaging 7.7 mpg and 7.4 mpg respectively. Open deck and tanker trailer combinations indicate nearly identical fuel economy at 6.5 and 6.4 mpg respectively. The results show a wide range of fuel economy for each type of operation shown. Where do you fall within the range?

Figure 2.1 Fuel Economy and Distance Driven by Truck Type

Truck Type	Fuel Economy (mpg)		Annual Distance Driven (miles)	
	Average	Range	Average	Range
Dry van trailer	7.7	6.0 – 9.0	129,000	36,000 – 200,000
Refrigerated trailer	7.4	6.0 – 9.0	117,000	36,000 – 160,000
Open deck	6.5	5 – 8.5	114,000	3,000 – 182,000
Tanker trailer	6.4	5 – 7.8	104,000	25,000 – 186,000

Number of respondents: dry van (41), refrigerated (31), open deck (38), tanker (15)

Note: results are in miles per imperial gallon and not U.S. gallons

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The following charts illustrate the distribution of fuel economy by type of truck/trailer combination. About one-third of dry van operators achieve fuel economy in the 7.5 – 7.9 mpg range. Almost one-quarter (23%) reported fuel economy in the 8.0 – 8.4 mpg range. In total, 62% show fuel economy of 7.5 mpg or better. Are you in this group? Results for refrigerated van operations are similar, with 63% showing fuel economy of 7.5 mpg or better. See Figures 2.2 and 2.3 below.

Figure 2.2 Fuel Economy Distribution for Dry Van Operations (30 responses)

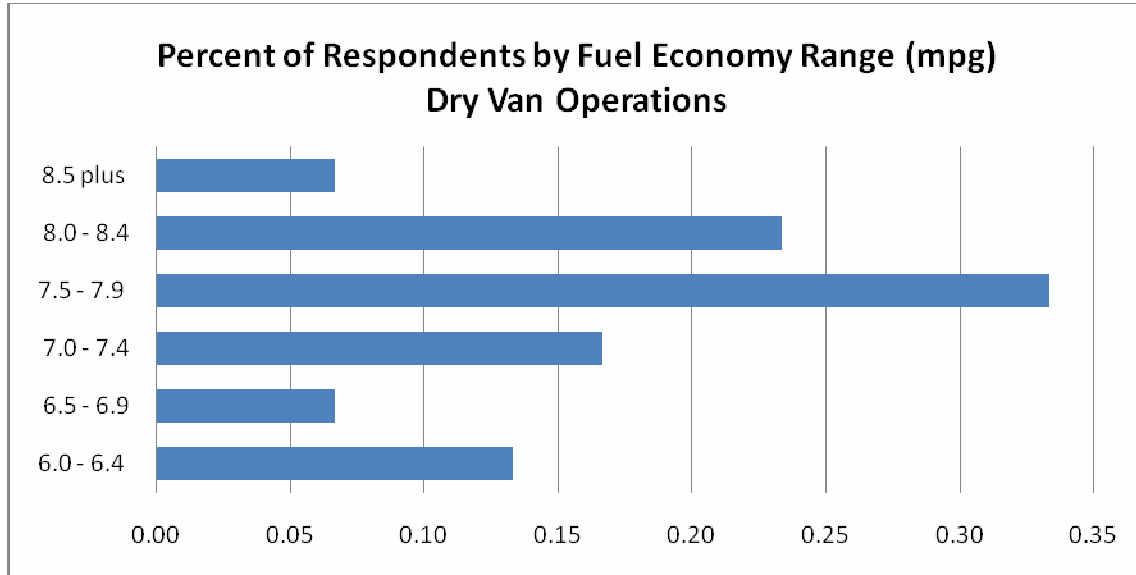
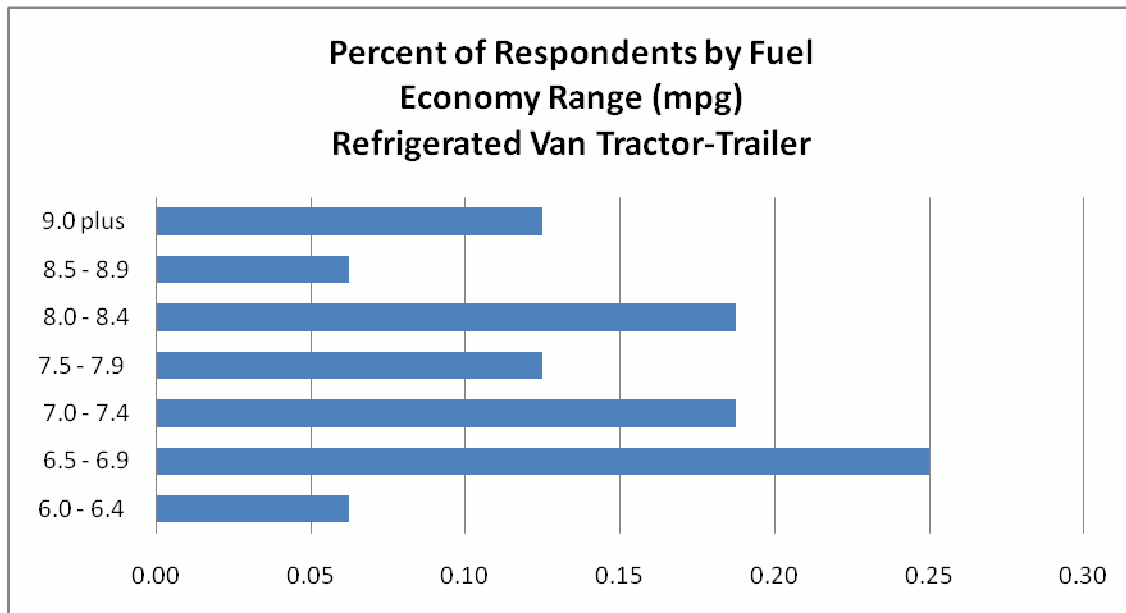


Figure 2.3 Fuel Economy Distribution for Refrigerated Van Operations (16 responses)



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Compared to van operations, open deck and tanker operations show lower fuel economy. Tanker operations reported the widest range of fuel economy with about one-third reporting fuel economy of less than 5.9 mpg, one-third in the 6.0 – 6.9 mpg range, and one third above 7.0 mpg. Open deck operations show 57% of respondents with fuel economy in the 5.5 – 6.9 mpg range. See Figures 2.4 and 2.5 below.

Figure 2.4 Fuel Economy Distributions for Tanker Operations (11 responses)

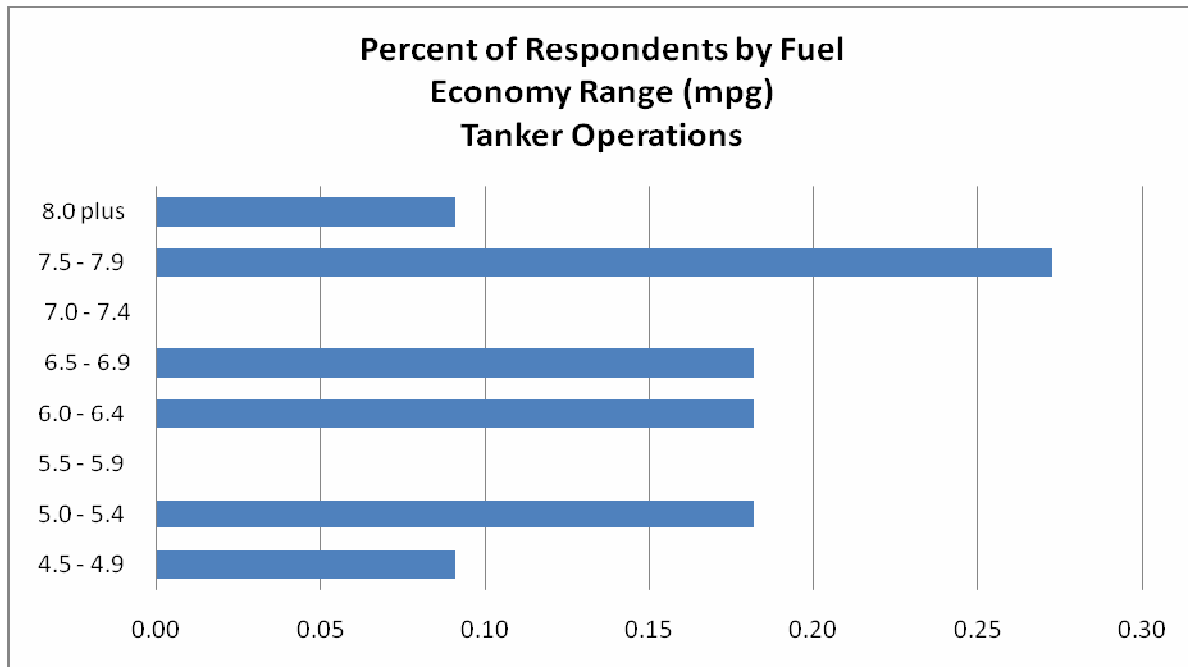
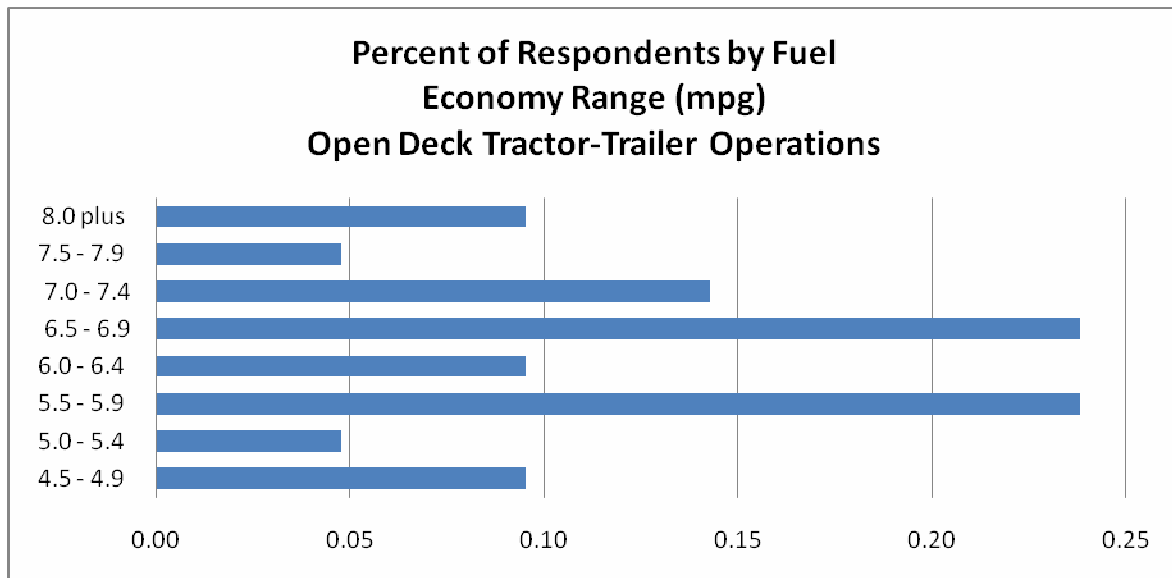


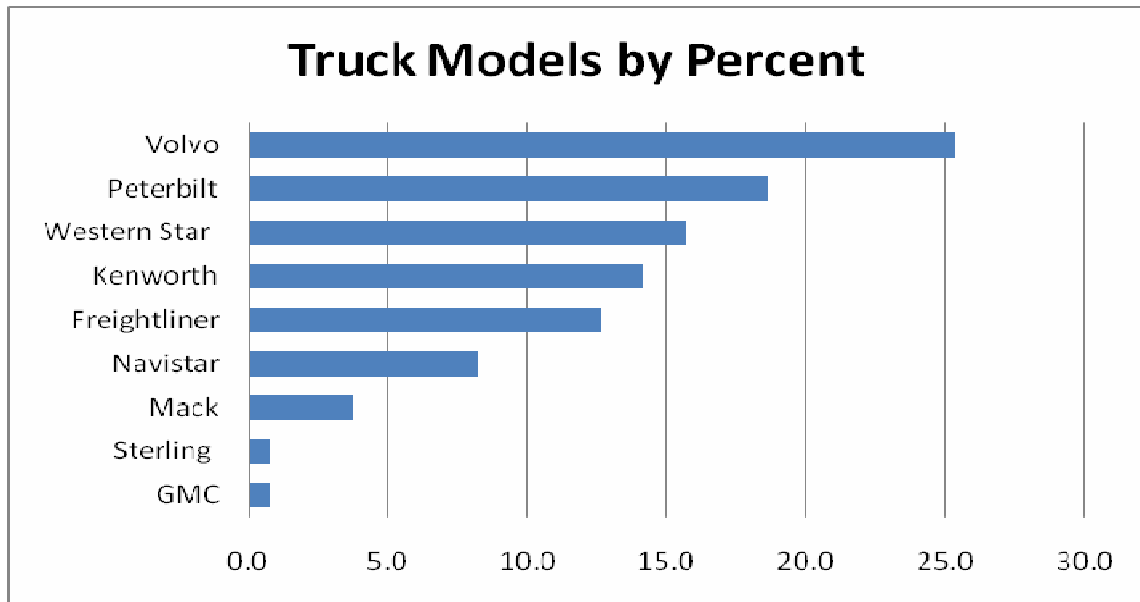
Figure 2.5 Fuel Economy Distributions for Open Deck Operations (21 responses)



3.0 Truck Make

The most popular truck make was Volvo, with 25.2% of those responding to the question, while Peterbilt is the second most popular at 18.9%.

Figure 3.1 Truck Model Distribution (134 responses)

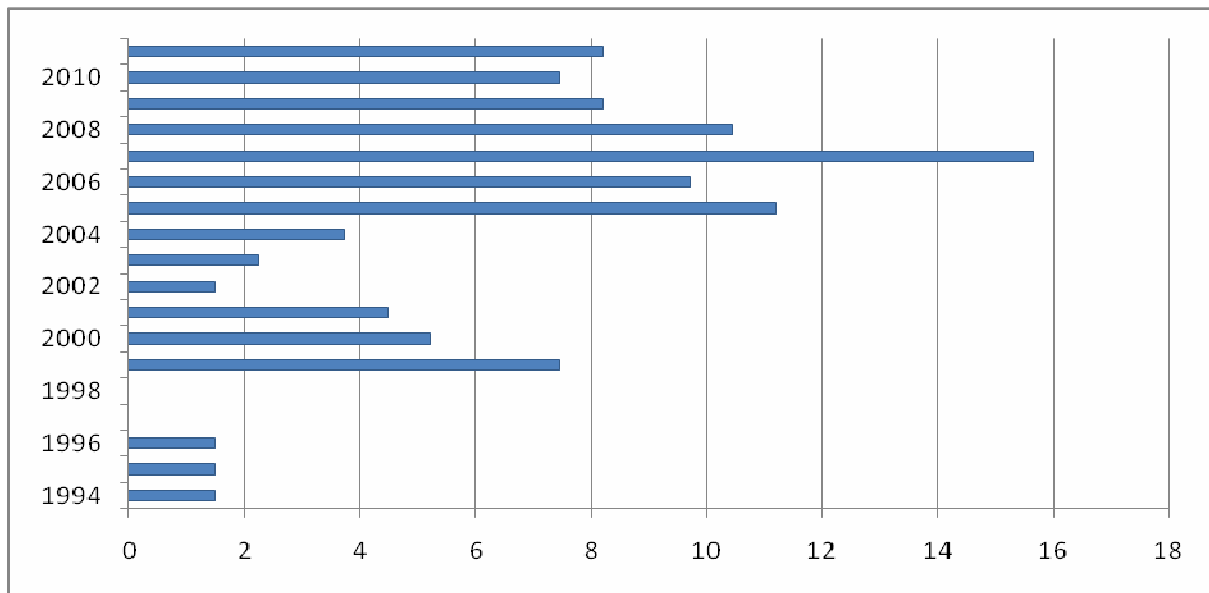


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4.0 Vehicle Age

The average vehicle age was 4.9 years. Figure 4.1 shows that the vehicle age distribution is fairly even from 2005 onwards indicating that owner-operators have been purchasing new vehicles. The older vehicles (1996 and older) tend to be used in low annual distance travelled applications.

Figure 4.1 Percent Distribution by Vehicle Age (year of manufacture)

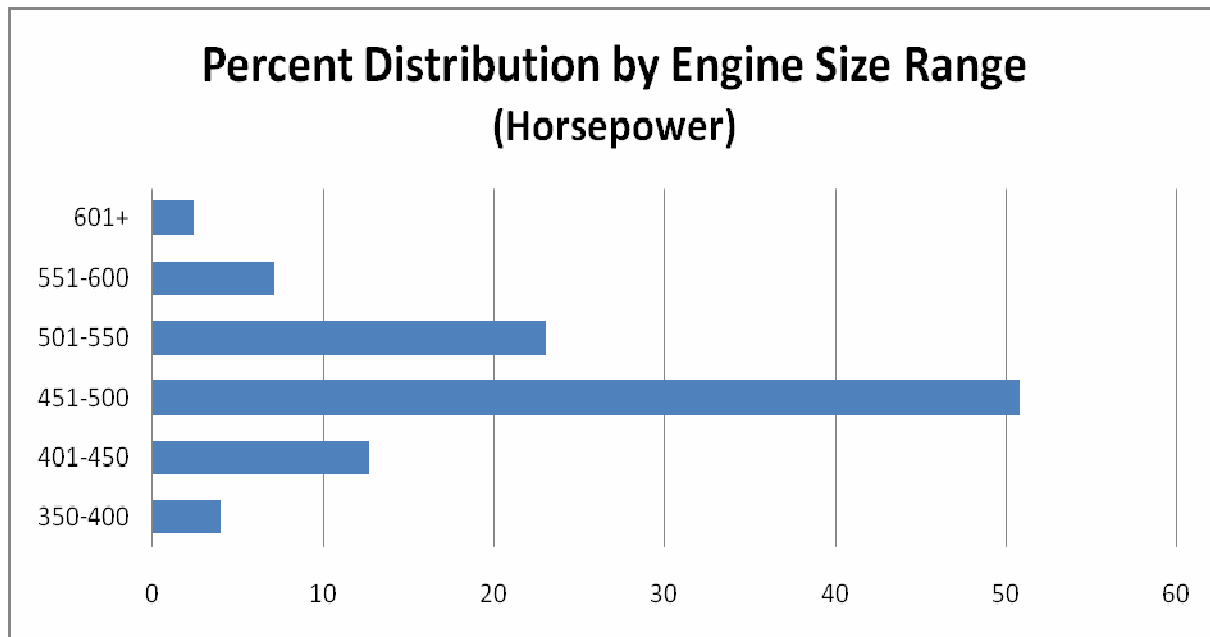


5.0 Engine Size

The most common engine size was in the 451-500 horsepower range with just over 50% of respondents in this category. Generally speaking, the newer the vehicle, the larger the engine size, reflecting the nature of variable horsepower engines where one does not have to trade off engine size against fuel economy.

Average fuel economy for dry van and refrigerated units with an engine size of 451-500 hp had a fuel economy of 7.4 mpg, 5.7% higher than the fuel economy of 7.0 mpg for the smaller 401-450 hp units.

Figure 5.1 Percent Distribution by Engine Size Range (horsepower)



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6.0 What can you do to improve your fuel economy?

Fuel economy can always be improved. Even if it's just a fraction of a mile-per-gallon, it matters. Here are a few simple things you can do right now to reduce fuel consumption:

- ✓ Minimize idling
- ✓ Check tire pressure regularly to ensure proper inflation and minimize tire drag
- ✓ Cruise at the engine speed sweet-spot; usually 1300 - 1400 rpm
- ✓ Use cruise control
- ✓ Use progressive shifting and other fuel efficient driving techniques
- ✓ Reduce the gap between tractor and trailer
- ✓ Run slower than the prevailing flow of traffic to avoid using brakes
- ✓ Check your fuel economy frequently – keep records

Here are a few other steps that will improve fuel economy in the longer term:

- ✓ Carefully spec your vehicle for the intended application
- ✓ Consider the advantages of an aero-spec, or at least ditch the air cleaners
- ✓ Spec your powertrain for optimum engine speed at reasonable road speed
- ✓ Spec low-rolling-resistance dual tires or wide-base single tires
- ✓ Spec a diesel or battery powered APU for engine-off climate control

Here are a few operational considerations that can help improve fuel economy:

- ✓ When possible, plan your trip times so as to avoid congested roadways
- ✓ Optimize your route to minimize stop-and-go urban driving
- ✓ Consider a carrier partner that runs fuel efficient trailers
- ✓ Carry a minimum amount of fuel to reduce vehicle weight

There are many way of reducing fuel consumption, but the least expensive to implement and most effective way in almost every case is to develop fuel efficient driving habits.

Trucking costs money. OBAC can help you make more and keep more of what you earn. It's a new way to run. Let OBAC help you increase your profitability.