The 6th International Conference on Life Cycle Management in Gothenburg 2013

ENVIRONMENTAL FOOTPRINT CALCULATOR

Lars Mårtensson, VolvoTrucks, BC10110 VLH5B, 405 08 Gothenburg,
lars.martensson@volvo.com

Keywords: LCA; truck; customer; society; tool.

ABSTRACT

Volvo has since early 90's used the LCA methodology. In 2001 Volvo Trucks launched the first so called environmental product declaration for the FH and FM trucks, which is still unique for the truck industry. In this tool anyone, e.g. a customer, can easily calculate environmental quantities through choosing type of truck and make comparisons e.g. between hybrids and alternative fuels. Volvo Trucks acknowledge that transports are parts of most product life cycles and that we can contribute to the LCM work in companies. But maybe the most important usage is to raise the level of knowledge within Volvo Trucks, among our customers and society in general about the areas to focus and to have a holistic view.

INTRODUCTION

The Volvo Group Environmental Policy states "In our efforts to reduce environmental impact of our products, operations and services we shall take account of the complete life cycle". Volvo Group has since early 90's used the LCA methodology to identify and work to minimize environmental hot spots, and to assess improvements.

In 2001 Volvo Trucks launched the first so called environmental product declaration for the FH and FM trucks and was and still is unique for the truck industry.

In this tool (Environmental Footprint Calculator) today anyone, e.g. a customer, can easily calculate environmental quantities through choosing type of truck and fuel consumption and make comparisons between trucks, 10 years old up to new models, hybrids and alternative fuels.

MATERIALS AND METHODOLOGY

Volvo Trucks believes that there is a need among customers and in the society about quantative information about the environmental aspects of trucks and transports. The first environmental product declaration was based on a screening LCA for the Volvo trucks FH and FM in Europe. The study was split in parts covering each one of the sixteen modules of the trucks. The system was divided in three areas:

- Production

- Usage
- End-of-life

The results vary considerably depending on the in-put data, the most important of which are fuel consumption, mileage, engine and fuel. These are some of the parameters used as input in the calculation tool on the web. Depending on the data the user can calculate a single transport, the complete truck life cycle or a comparison between different alternatives.

The environmental product declaration and the calculation tool serve as important tools to raise the awareness and knowledge about the environmental aspects of trucks and transports internally within Volvo Trucks as well as externally among customers, transport buyers and society in general.

Volvo Trucks has today conducted screening LCA for the trucks FL, FE, FE-hybrid, FM MethaneDiesel and the new FH. It means that all trucks sold on the European market are today available in the environmental footprint calculator on the web. Since the launch of the web tool, it has also been translated to most European languages in order to support local usage.

RESULTS

The usage of screening LCA has successfully resulted in identification of environmental hotspots and work to minimize and assess improvements.

The environmental footprint calculator has raised the level of knowledge within Volvo Trucks, among our customers and society in general about the most important areas to focus and the importance to have a holistic view.

DISCUSSION

Volvo Trucks is today the first and only truck manufacturer who has made the data from screening LCA available in a calculation tool. It is only possible to compare Volvo trucks and different alternatives. This has been a challenge since the data quality, methodology development and general knowledge has changed over time and the difference between old and new studies had to be handled in order to make it possible to compare. This will remain as a challenge also in the future.

CONCLUSIONS

Screening LCA can successfully be translated in to a useful tool for customers, transport buyers and other stakeholders in the society. The environmental footprint calculator has raised the level of knowledge and resulted in activities to reduce the environmental impact.

REFERENCES

Lars Mårtensson, Volvo Trucks, 2013 www.volvotrucks.com/trucks/global/en-gb/values/environment/footprint-calculation/Pages/Footprint_calculation.aspx

Volvo Trucks, Press release, 2011, New environmental footprint calculator from Volvo Trucks helps lower emissions