Volvo Trucks. Driving Progress

How does a Volvo truck get recycled?

Volvo Trucks has had a recycling strategy in place for decades and today about 90% of a Volvo truck is often recycled or reused through various processes. So how does it work? First, recycling takes different forms.

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- **Component recycling** – Dismantled components such as engines and gearboxes are sent to be remanufactured.
- **Material recycling** – Material recycling means that the material is reclaimed and used again, such as with iron.
- **Energy recovery** – Energy reclamation means that the stored energy in the material is used. Various kinds of energy can be extracted through burning.

In this process, if any waste cannot be recycled or re-used, a landfill may be considered as a last disposal alternative.

So, what can happen to different parts of the truck?

This is a typical recycling process for a scrapped Volvo truck in Sweden.

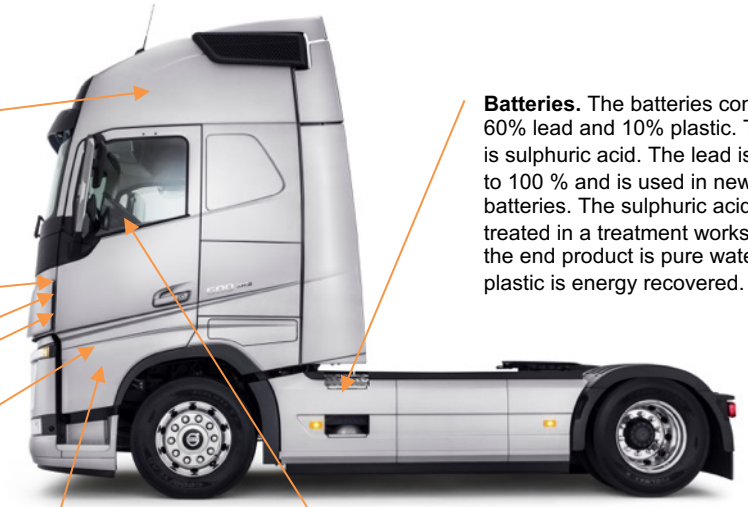
Metals. Practically 100% of the metals are recycled. When a Volvo FH is scrapped, more than nine tonnes of various materials are recovered for recycling.

Refrigerant. R134a is a HFC (Hydro-Flouro-Carbon), which does not affect the ozone layer but is a strong greenhouse gas. R134a can be reused with help from a special recycling machine which cleans the gas before it is reused. However, R134a is not recyclable if it is contaminated with oil. It is then taken away by the supplier and incinerated at high temperatures with energy recovery and a thorough gas treatment.

Glycol. Glycol of high quality can be reused. Otherwise, glycol can be treated with bacteria and the rest product is water.

Washer fluid. Reused.

Oil. Oil of very high quality can be reused. Otherwise it can be used for energy in, for example, the cement industry.



Batteries. The batteries consist of 60% lead and 10% plastic. The rest is sulphuric acid. The lead is recycled to 100 % and is used in new batteries. The sulphuric acid is treated in a treatment works where the end product is pure water. The plastic is energy recovered.

Oil filters. The oil filters are first chopped into small pieces and then centrifuged for the oil to be separated and collected in a separate container. The oil is shipped to Germany for recycling. The solid material is sorted with help of a magnet. The metal is recycled and remaining materials (plastics) are sent to energy recovery. The recycling rate for oil filters with this method is 90 %.

Airbags. Collected and sent to supplier, where metal parts are recycled and the plastic parts are used for energy recovery. The powder is destroyed by incineration.

Typical recycling process

Continued

Electronics. Many are disassembled by hand and metal and plastic components are recycled.

Plastics. Plastics can be divided into two groups: thermosetting plastics and thermoplastic resins. Thermosetting plastics are in general difficult to recycle and can only be recycled as filling material or as fuel. These plastics have a low energy value. Thermoplastic resins can be recycled by melting them down at an approved incineration station.

Glass. Can be recycled after purification by distillation.

Textiles. Used for energy recovery.

Rubber. Rubber, which is not in tyres, is used for energy recovery.

Lamps. During recycling of lamps, the materials are sorted in pure fractions which can be recycled.

Silencers. Fragmented and the metal is recycled. Other materials are energy recovered.

Brake discs: Recycled

Tyres. A truck tyre can have up to three or four lives. Tyres can be recapped which is very common when it comes to truck tyres or exported to countries where the legal demands on tyre depth are lower. Worn out tyres can be used for energy recovery in the cement industry or the material can be reused in for example road cones. Truck tyres are commonly used as blasting mats.

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