

TENNESSEE GREEN STAR PARTNERSHIP MEMBER HIGHLIGHT



V O L V O P E N T A

By: Vaughn Cassidy

As part of Volvo Group, the Volvo Penta branch is targeting net-zero value chain emissions by 2040 through its commitment to the Science Based Targets initiative, a partnership between the United Nations, World Resources Institute and the World Wide Fund for Nature as well as other organizations. A significant focus of Volvo Penta Marine of Lexington's work is to achieve net-zero through focusing on recycling and enhancing the sustainability of production processes. The Lexington facility is Volvo Penta's premiere location for manufacturing the entire range of gasoline engines and many of the company's sterndrives are produced and then distributed worldwide. Volvo Penta recently made significant investments and improvements to the 210,000-square-foot facility, including installation of a state-of-the-art diesel engine test cell that enables the company to perform on-site testing and specification certification. The expansion also included addition of a production line for the final assembly of off-road diesel engines. This operation allows for the customization of orders and reduced delivery lead times for the company's growing customer base in the North American market.

Volvo Penta in Lexington specializes in staging medium-sized 6-cylinder and 8-cylinder gasoline engines, initially developed for on-road vehicles, for use as in-board boat motors. Transoms are built out, conditioned, and refitted for use in a marine environment. Motor manifolds and carburetors as well as the cooling systems are altered, resulting in a lot of metal to be recycled. Over 130 tons of aluminum and mixed metals were recycled in 2021 and 2022.

Included in the metals recycling are the swarfs and cuttings from tooling necessary to retro-fit engines to tolerate a water environment. "The amounts are separated for accounting purposes, but I include the totals in my recycling numbers," said Trevor Mangelson, Quality Engineer and ISO 14001 Representative for Volvo Penta. Volvo Penta actively recycles all their cardboard, which has totaled close to 50 tons in the last two years. Additionally, there is an active effort to recover solvents from various processes containing N-Butyl Alcohol, with the facility recovering almost 700 gallons in 2021 and 2022.

FEATURED THIS MONTH

- Partner since 2007
- Over 150 employees at this site

FUN FACT:

- Corporate Goal of Net-Zero by 2040 for all sites
- First Volvo Marine Engine was produced in 1901
- Volvo's premier site for marine engines



The corrosive environment of salt and fresh water requires that the transoms and the motor props be chromium coated to protect from pitting and rust. Even though the coating is trivalent chromium and there is no conversion chemically to hexavalent chromium anywhere in the process, the wastewater must be filtered from entering into Lexington's wastewater system. There is a unique drag waste system that ensures that no chromium leaves the facility. Drag waste and filter press waste are properly disposed. Manual machine buffing has been reduced by the inclusion of a system that literally drags the transoms on a carousel through a ceramic media. This process saves the health and overall quality of life of the employees that used to do the machine buffing by hand.

Volvo Penta Marine is a well-known and much desired place of employment for the people of Lexington. Many of the engines that they produce are tested in marine vessels at the local Beech Lake, a popular 3,000-acre lake developed by the Beech River Watershed Development Authority. Volvo Penta Marine partners with the Chamber of Commerce to sponsor events at the popular lake location.

Volvo Penta Marine has been in Lexington long enough that they have become an indispensable partner in many community events. In the past year, Volvo has participated in the local Relay for Life, the Carl Perkins Child Abuse Center, Chamber of Commerce events and regularly participate in food drives to collect donations for local churches. They have also sponsored youth events such as the Scotts Hill STEAM Fair and city and county baseball and softball teams.

Our Green Star Partner program is proud and fortunate to have such quality industries participating as Volvo Penta Marine of Lexington.



[The Tennessee Green Star Partnership](#) is a voluntary environmental leadership program designed to recognize industries in the state that are committed to sustainable practices. If you are interested in joining other sustainable industries in Tennessee by becoming a member, please contact us.