

# **Automotive Pump for Thermal System Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025 - 2034**

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## **Abstracts**

The Global Automotive Pump For Thermal System Market, Valued At USD 3.9 Billion In 2024, Is Projected To Grow At A CAGR Of 6.1% From 2025 To 2034. As The Automotive Industry Shifts Towards Electric Vehicles (EVs) And Hybrid Electric Vehicles (HEVs), The Demand For Efficient Thermal Management Systems Is Rising. These Systems Are Crucial For Maintaining Optimal Temperatures In Various Vehicle Components, Including Batteries And Power Electronics, Which Are Critical To EV Performance. The Demand For Advanced Cooling Solutions Is Growing As These Thermal Systems Help Enhance Vehicle Functionality And Battery Life By Maintaining Temperature Stability.

A Significant Factor Driving This Market is the rise of thermal energy recovery systems (TERS), which are used to capture waste heat produced by engine or exhaust systems. These systems improve overall energy efficiency and further boost the demand for automotive pumps. These pumps play a vital role by circulating coolant through the system, transferring heated liquid energy to operate auxiliary features, or enhancing driving performance. They are essential in the development of modern vehicles, including EVs and HEVs.

The market is segmented based on pump type, with centrifugal pumps, positive displacement pumps, and variable displacement pumps being the main categories. Variable displacement pumps accounted for USD 1.9 billion of the market in 2024 and are expected to show significant growth over the forecast period. These pumps are preferred for their flexibility and responsiveness in complex thermal systems, where they provide better control under varying driving conditions, such as high-performance driving or in cold weather and heavy traffic situations.

The market is also divided by sales channel into OEM and aftermarket segments. In 2024, the OEM segment held a dominant market share of 71%. OEMs use direct-to-

consumer platforms, including e-commerce, to distribute replacement parts and aftermarket pumps. This approach not only improves their market reach but also enhances customer support and feedback.

By refrigerant type, the market is segmented into oil-based, liquid coolant circulation, and air-based refrigerants. The liquid coolant circulation segment held a majority share of 58% in 2024, driven by the growing demand for efficient battery temperature management in electric and hybrid vehicles.

The automotive pump for thermal system market is further categorized by propulsion type, with the internal combustion (IC) engine segment holding the largest share in 2024. Thermal management is particularly crucial in turbocharged engines, where effective cooling systems are required to prevent overheating and ensure long-lasting performance.

In North America, the market was dominated by the U.S., with the region accounting for over 30% of the global market share in 2024. The demand for thermal management systems in EVs is increasing due to advancements in battery technology and the push for more energy-efficient vehicles.

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