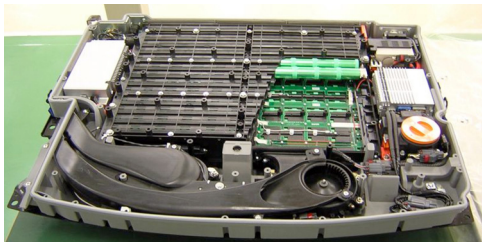
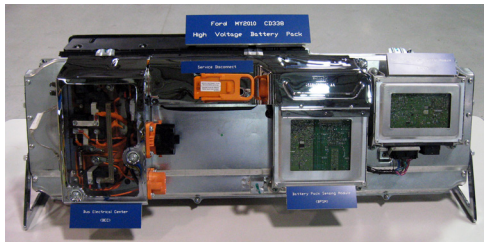
Ford Hybrid Battery Evolution

Battery size, weight and volume have decreased significantly since Ford Motor Company began hybrid vehicle production in 2004 with the 2005 Escape Hybrid. Just three years after launch of the 2010 Fusion Hybrid, lithium-ion batteries in vehicles such as the 2013 C-MAX Hybrid afford even more benefits than those found in previous-generation hybrids.

	2005 Escape Hybrid	2010 Fusion Hybrid	2013 C-MAX Hybrid
			
Battery cell type	Nickel-Metal-Hydride (NiMH) Cylindrical Cells	Nickel-Metal-Hydride Cylindrical Cells (generation two)	Lithium-Ion Prismatic Cells
First year of production	2004	2009	2012
Battery weight	Baseline	30% lighter	50% lighter
Cell power density (e.g., watts/liter)	Baseline	20% higher cell power-to-volume ratio	40% higher cell power-to-volume ratio
Strengths	· Double the energy-to-weight ratio compared with lead-acid · Proven robustness	· Double the energy-to-weight ratio compared with lead-acid · Proven robustness · Greater energy efficiency · Full power across wider temperature range	· Double the energy-to-weight ratio compared with NiMH · 10-15% smaller than NiMH batteries of equivalent power and energy (allows more cargo/cabin space than with NiMH) · Proven robustness
Battery life	≥ 10 years/150K Miles	≥ 10 years/150K Miles	≥ 10 years/150K miles