



Will Heltsley

VP of Propulsion Engineering

As Vice President of Propulsion Engineering of SpaceX, Will Heltsley is responsible for design, development, manufacturing, test, and flight operation of the company's portfolio of large liquid propellant rocket engines including the Merlin and Raptor engine families. His responsibilities also include all new turbomachinery and combustion devices development at SpaceX, additive manufacturing technology development, and the hot-gas reaction control and propellant gasification systems used in the Starship vehicle.

After joining SpaceX in 2009, Heltsley has overseen numerous significant updates and upgrades of both engines, development of the first orbital-class booster engine capable of air-restart and propulsive landing, and transition to high-rate production, launch, and reuse operations. In partnership with NASA, his team completed the first certification and crewed flight of a commercially developed engine, including the first additively manufactured components certified for crew. Under his leadership, the Merlin family has achieved a test and flight heritage of over 6600 engine starts and half a million seconds of operating time across more than 650 engines, and developed a highly reliable flight heritage of over 850 engine-flights, a record unmatched by any other orbital-class engine in American history.

Heltsley has overseen rapid development and testing of the Raptor engine, the first flight-ready methane-oxygen full-flow staged combustion engine. In less than 17 months since the initial engine delivery, the program has completed manufacturing of 32 engines and achieved over 210 tests across more than 25 engines and accomplished the first test flight of a full-flow staged combustion engine.

Prior to joining SpaceX, Heltsley received his bachelor's degree in mechanical engineering with honors from the California Institute of Technology, and a master's degree in mechanical engineering from Stanford University. He spent five years prior to joining SpaceX designing, analyzing, building, and operating a test facility at Stanford to study ignition and combustion in supersonic crossflows, and has published several papers on the subject.

In addition to space exploration, Heltsley is also involved in exploration and scientific research of caves, and is a Fellow of the Cave Research Foundation.