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DEVELOPMENT OF GRAPPLING AND RESUPPLY ACTIVE SOLUTION FOR PROPELLANTS (GRASP), AN ACTIVE INTERFACE SOLUTION FOR REFUELLING.

Abstract

Orbit Fab UK are developing an indigenous active docking and fuel transfer solution to couple with the existing Rapidly Attachable Fuel Transfer Interface (RAFTI) passive docking solution. The interface is called GRASP which stands for Grappling and Resupply Active Solution for Propellants. The development of GRASP promotes a paradigm shift in how space missions will be operated, to support other future space sustainability missions, and enable the growth of more persistent space architectures across a range of space eco-systems. The project, funded by the UKSA is a technology development pipeline that will be a valuable step in establishing a RAFTI compatible, active coupling for future in-orbit servicing missions. The technical activity includes specification, design, analysis, build and test of GRASP. The tests range from elemental checkouts to end to end mission representative testing, with fluid transfer with the end goal of generating a functional model that can be taken forward to engineering qualification beyond the breadboarding activity.