Moog

Press Information

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NASA Selects Moog to Power and Control VIPER Lunar Rover

Moog's Integrated Avionics Unit and Spacecraft Energization and Power Interfacing Assembly will be the main power and computer management source for the Rover that will explore the Moon's South Pole

East Aurora, NY (July 7, 2021) – Moog Inc. (NYSE: MOG.A and MOG.B) announced today that the company's space products have been selected for an upcoming NASA mission to explore the Moon's South Pole. The Volatiles Investigating Polar Exploration Rover, or VIPER, is NASA's first mobile robotic rover mission to the Moon.

VIPER will rely on Moog's radiation-hardened avionics technology to control the rover during its 100day mission. The Integrated Avionics Unit (IAU) and Spacecraft Energization and Power Interfacing Assembly (SEPIA) will be the main computer and power management source for VIPER, essentially the "brains" of the rover.

Moog's IAU combines traditional command and data handling and electric power subsystem functions. The IAU controls VIPER's instruments for command, telemetry, heaters. and temperature/voltage/current sensors. In addition, the Moog equipment provides radiation-tolerant image processing and storage that will guide VIPER's maneuvers across the lunar surface. The IAU and SEPIA will also manage the solar array, battery charging, and power distribution that support the large power requirements needed for wheel motor control and drilling capabilities. A particularly unique capability of the Moog equipment is the very low-power hibernation mode that will allow VIPER to survive the challenging prolonged lunar nights throughout the mission.

VIPER represents the first resource mapping mission on another celestial body. It will determine the concentration of water and ice that could eventually be harvested to sustain human exploration. This data will be instrumental in determining possible future landing sites for the NASA Artemis program, which will return Americans to the moon.

VIPER is set to land on the lunar surface in late 2023 under NASA's Commercial Lunar Payload Services (CLPS) program. VIPER will be the largest and heaviest payload delivered by a CLPS provider.

"Our team continues to find innovative solutions to not only survive but excel in the harsh environment of space. We are thrilled that for more than 60 years, NASA engineers have continued to trust us with these critical missions," said Maureen Athoe, President of Moog Space and Defense. Chris Hodge, Moog Gilbert, AZ General Manger, added, "We are excited to be providing the NASA VIPER control electronics. The extreme environments in the shadowed craters of the Moon's South Pole have driven challenging power and thermal designs to survive the hibernation phases. Moog is proud to be part of this mission that will enable future generations of human exploration."

For broadcast media assistance, including scheduling interviews, contact Katie Gibas at kgibas@moog.com. For progress updates from NASA, go to <u>www.nasa.gov/viper</u>.

About Moog Inc.

Moog Inc. is a worldwide designer, manufacturer, and integrator of precision control components and systems. Moog's high-performance systems control military and commercial aircraft, satellites, and space vehicles, launch vehicles, missiles, automated industrial machinery, and marine and medical equipment. Additional information about the company can be found at www.moog.com.

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