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**Big leap in Space Defence Technology: Green Propulsion System,
developed under DRDO’s Technology Development Fund, successfully
demonstrates in-orbit functionality**

A Green Propulsion System, developed under the Technology Development Fund (TDF) scheme of DRDO, has successfully demonstrated in-orbit functionality on a payload launched by PSLV C-58 mission. This project - 1N Class Green Monopropellant thruster for altitude control and orbit keeping of micro satellite - was sanctioned to a Bengaluru-based start-up Bellatrix Aerospace Pvt Ltd (Development Agency).

The Telemetry Data from PSLV Orbital Experimental Module (POEM) at ISRO Telemetry, Tracking and Command Network (ISTRAC), Bengaluru has been validated with ground level solution and is found to have exceeded all performance parameters.

This innovative technology has resulted in non-toxic and environment-friendly propulsion system for low orbit space. The system consists of indigenously-developed Propellant, Fill and Drain Valves, Latch Valve, Solenoid Valve, Catalyst Bed, Drive Electronics, etc. It is ideal for space mission with high thrust requirements.

The complete project has been carried out by the Development Agency under guidance of Project Monitoring & Mentoring Group of DRDO. It has demonstrated pulsed mode and steady state firing in vacuum, passivation of residual propellant in outer space, propellant realisation and establishing of filling procedure under the TDF.

The TDF is a flagship programme of Ministry of Defence executed by DRDO under the ‘Make in India’ initiative for funding innovation in defence and aerospace, especially to start-ups and MSMEs.

SR/Savvy