

NATION

Sakal Times

Glitch in Mars ops but mission 'safe'

Bengaluru: Indian Space Research Organisation on Monday failed to fully meet the objective of the fourth orbit-raising operation conducted on Mars Orbiter Spacecraft as flow to the liquid engine stopped, but allayed apprehensions over the ambitious venture to the Red Planet.

This manoeuvre planned to raise the apogee (farthest point to Earth) from 71,623 km to one lakh km but could only achieve 78,276 km on the back of an incremental velocity of 35 metres/second as against originally planned 130 metres/second.

"The spacecraft is in normal health. There is no concern at all. There is no problem at all in the system. Mars mission is 100 per cent safe", an ISRO spokesperson said here, after the below-par operation raised an alarm in some quarters.

'IN NORMAL HEALTH'

■ "The spacecraft is in normal health. There is no problem at all in the system. Mars mission is 100 per cent safe," an ISRO spokesperson said after the operation raised an alarm.

Bangalore-headquartered ISRO has now planned a supplementary orbit-raising operation tomorrow at 0500 hrs IST to raise the apogee to nearly one lakh km.

During the fourth orbit-raising operations, the redundancies built-in for the propulsion system were exercised - energising the primary and redundant coils of the solenoid flow control valve of 440 Newton Liquid Engine, and logic for

thrust augmentation by the attitude control thrusters, when needed.

"However, when both primary and redundant coils were energised together, as one of the planned modes, the flow to the Liquid Engine stopped. The thrust level augmentation logic, as expected, came in and the operation continued using the attitude control thrusters. This sequence resulted in reduction of the incremental velocity", ISRO said.

"While this parallel mode of operating the two coils is not possible for subsequent operations, they could be operated independently in sequence", according to the space agency.

During the orbit-raising operations conducted since November seven, ISRO has been testing the autonomy functions progressively, that are essential for Trans-Mars Injection (TMI). P77