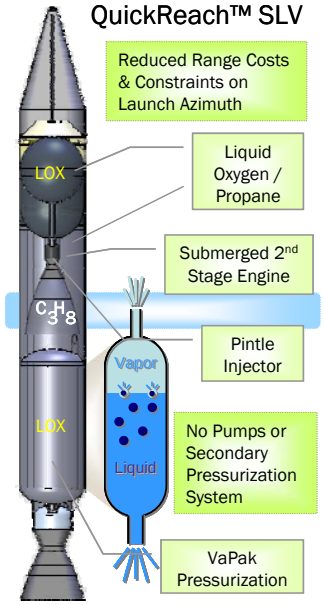
## Fact Sheet/Backgrounder

**- December 2007 -**

***AirLaunch LLC*** is a small business based in the Seattle, Washington area. The company provides innovative launch solutions and research and development for space programs. Its QuickReach™ Small Launch Vehicle (SLV) is funded under the DARPA / USAF Falcon SLV Program. The Falcon SLV objectives are to demonstrate affordable and Operationally Responsive Space (ORS), a priority goal in the National Space Transportation Policy. QuickReach™ is an air-launched containerized, self-pressurizing liquid two-stage rocket. It is designed to meet the Falcon SLV program goals and leads to new space lift capabilities for multiple customers.

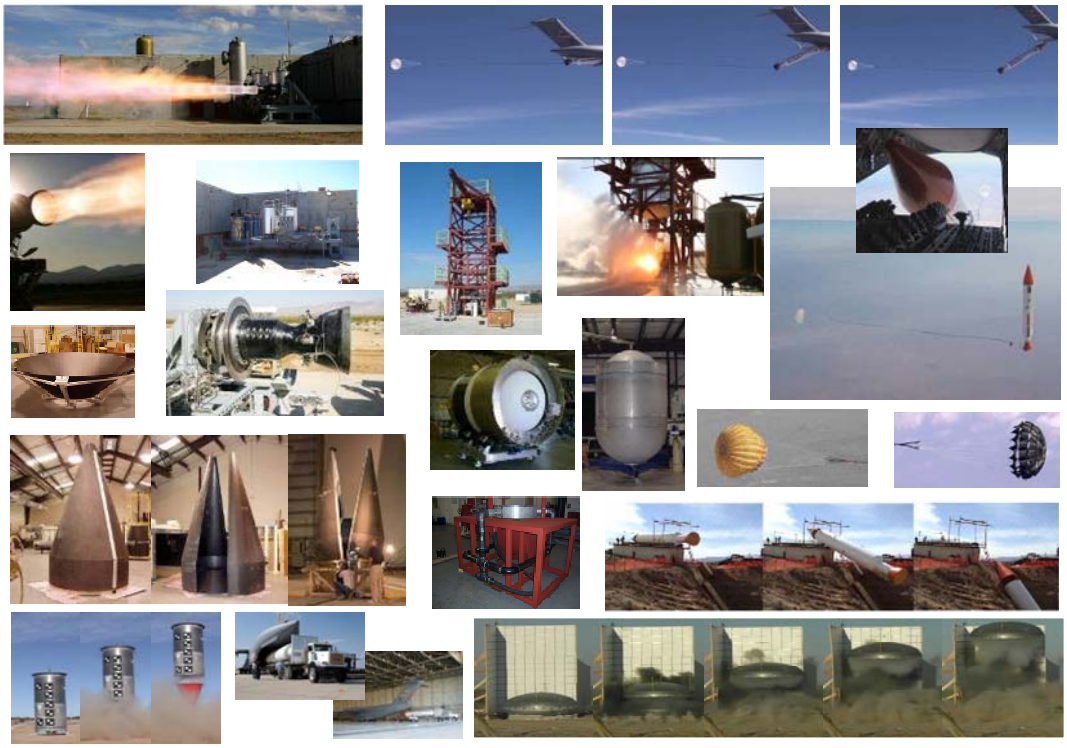



**AirLaunch LLC**

- Founded in 2003
- Entrepreneurial
  - Rapid Prototyping
  - Small, Agile Team

**QuickReach ™**

- 1000+ lbs to Low Earth Orbit
- Call-up to flight < 24 hours
- Less than $5 M per flight
- Safe & readily available propellants
- All azimuth flying range
- Launched from C-17
- Responsive
- Affordable
- Liquid Propulsion
  - LOX/Propane
  - Pintle Injector
  - VaPak
  - Self-Pressurization



**The Future of Space is Underway with the AirLaunch QuickReach™ Small Launch Vehicle**

## Facts and Background on the C-17

**QuickReach™ Drop Test Article loaded into the C-17 aircraft**

- AirLaunch choose the C-17 due to its good flying and maintenance record and its responsiveness (call-up and launch within a few hours)
- The C-17 Globemaster III is the newest, most flexible cargo aircraft to enter the airlift force
- The C-17 is capable of rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area
- The aircraft can perform tactical airlift and airdrop missions and can also transport litters and ambulatory patients during aeromedical evacuations when required
- The inherent flexibility and performance of the C-17 force improve the ability of the total airlift system to fulfill the worldwide air mobility requirements of the United States
- The C-17 measures 174 ft long (53 meters) with a wingspan of 169 ft, 10 in (51.75 meters)
- The aircraft is powered by four fully reversible, Federal Aviation Administration-certified F117-PW-100 engines
- The C-17 can take off and land on runways as short as 3,000 ft (914 meters) and as narrow as 90 ft (27.4 meters)
- The aircraft is operated by a crew of three (pilot, copilot and loadmaster)
- The cargo compartment design allows the C-17 to carry a wide range of vehicles, palleted cargo, paratroops, and airdrop loads
- The C-17 made its maiden flight on Sept. 15, 1991; the first production model was delivered on June 14, 1993
- The first squadron of C-17s, the 17th Airlift Squadron, was declared operationally ready January, 17, 1995
- The Air Force originally programmed to buy a total of 120 C-17s, with the last one being delivered in November 2004 – current budget plans involve purchasing 180 aircraft

## AirLaunch LLC QuickReach™ Completed Record-Setting Drop Tests from C-17

**AirLaunch's three C-17 Drop Tests have set the records for the longest and heaviest single objects ever dropped from this aircraft**

- Three drop tests from three separate unmodified C-17 aircraft have been performed by AirLaunch as part of the Falcon SLV program, each one setting a record for the longest and heaviest single objects dropped from the plane
- East tests dropped a simulated QuickReach™ rocket at 65.8 ft long and increased weight
- Drop # 1 conducted on September 29, 2005 with 50,000 lb Drop Test Article (DTA) dropped from 6,400 ft above ground level
- Drop # 2 conducted on June 14, 2006 with 65,000 lb DTA from an altitude of 29,500 feet and a true airspeed of 330 knots
- Drop # 3 conducted on July 26, 2006 with a full-weight 72,000 lb DTA from an altitude of 32,000 ft and a true airspeed of 330 knots
- The QuickReach™ booster rests inside the aircraft cargo bay on a Storage and Launch Carrier, consisting of 84 tire / wheel assemblies
- As the aircraft turned nose up by six degrees, gravity pulled the test article across the upturned tires and out the aft cargo door
- The test demonstrated the QuickReach™ release technology and the feasibility of Gravity Air Launch (GAL)
- Unlike the standard heavy equipment airdrop method, GAL imparts much of the launch carrier aircraft's altitude and airspeed onto the rocket, which in turn improves payload mass to orbit
- The tests were conducted at Edwards Air Force Base by the Air Force Flight Test Center 412th Flight Test Wing and 418th Flight Test Squadron, in conjunction with the Air Force Space Command Space and Missile Systems Center / Detachment 12, and the C-17 Systems Group and Air Mobility Command which supplied the aircraft