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# Commercial Space Transportation License

License Number: LRLS 18-106

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**VIRGIN  
ORBIT, LLC**

is authorized, subject to the provisions of 51 USC Subtitle V, ch. 509, and the orders, rules, and regulations issued under it, to conduct a reusable launch vehicle (RLV) mission.

**General.** Virgin Orbit, LLC is authorized to conduct an RLV mission to launch LauncherOne (L1) utilizing a Boeing 747-400 carrier aircraft. The RLV mission authorized by this license commences and concludes at Mojave Air and Space Port.

**This license is granted subject to the terms, conditions, and limitations set forth in licensing orders A, B, C, and any subsequent orders issued by the Office of Commercial Space Transportation.**

**The licensee shall at all times conduct its operations in accordance with the regulations prescribed by the Office of Commercial Space Transportation for the activities authorized by this license.**

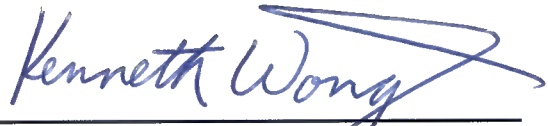


US Department  
of Transportation  
Federal Aviation  
Administration

800 Independence Ave., S.W.  
Washington, D.C. 20591

**Issued: June 29, 2018**

**Effective: June 29, 2018**

  
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Manager, Licensing and Evaluation Division

**License Order No. LRLS 18-106A**

OFFICE OF  
COMMERCIAL SPACE TRANSPORTATION  
LICENSE ORDER REGARDING

**REUSABLE LAUNCH VEHICLE (RLV) MISSIONS**

AUTHORIZED BY LICENSE NO. LRLS 18-106  
ISSUED TO

VIRGIN ORBIT, LLC

1. Authority: This Order is issued to Virgin Orbit, LLC (referred to as VO) under 51 U.S.C. subtitle V, chapter 509, and 14 C.F.R. Ch. III.
2. Purpose: This Order modifies License No. LRLS 18-106, issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, authorizing VO to conduct an RLV mission to launch the LauncherOne (L1) launch vehicle utilizing a Boeing 747-400 (747-400) carrier aircraft; and prescribes as conditions to License No. LRLS 18-106 certain requirements applicable to this mission.
3. Definitions: For purposes of License No. LRLS 18-106 and any orders issued by the FAA pertaining to activities covered by License No. LRLS 18-106:
  - (a) "Launch" means pre-flight ground operations, flight, and activities after flight necessary to bring the 747-400 to a safe condition.
  - (b) "Pre-flight ground operations" involve VO's pre-flight preparations of L1 and Boeing 747-400 at Mojave Air and Space Port.
  - (c) "Flight" means flight of L1 commencing upon take-off of the 747-400 from Mojave Air and Space Port with the intent to launch L1. Flight ends upon safing of the L1 launch vehicle stages or components that reach Earth orbit following separation of the payload from the L1 launch vehicle or upon wheels stopping after landing of the 747-400 at Mojave Air and Space Port, whichever occurs later.

**License Order No. LRLS 18-106A**

4. License Term: License No. LRLS 18-106 terminates upon completion of the RLV mission authorized by the license, or on December 31, 2019, whichever occurs first.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

By:   
Kenneth Wong, Manager  
Licensing and Evaluation Division

Issued: June 29, 2018

Effective: June 29, 2018

**License Order No. LRLS 18-106B**

OFFICE OF  
COMMERCIAL SPACE TRANSPORTATION  
LICENSE ORDER REGARDING

**FLIGHT**

AUTHORIZED BY LICENSE NO. LRLS 18-106  
ISSUED TO

VIRGIN ORBIT, LLC

1. Authority: This Order is issued to Virgin Orbit, LLC (referred to as VO), under 51 U.S.C. subtitle V, chapter 509, and 14 C.F.R. Ch. III.
2. Purpose: This Order modifies License No. LRLS 18-106, issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, authorizing VO to conduct an RLV mission to launch the LauncherOne (L1) launch vehicle utilizing the Boeing 747-400 carrier aircraft; and prescribes as conditions to License No. LRLS 18-106B certain requirements applicable to the authorization to conduct a flight.
3. Authorization: VO is authorized to conduct a flight:
  - (a) Using L1, in combination with the 747-400 carrier aircraft that must hold a valid FAA experimental airworthiness certificate and must operate in accordance with the operating limitations of that certificate and the applicable sections of 14 C.F.R. part 91;
  - (b) From Mojave Air and Space Port, California;
  - (c) Transporting a mass simulator with CubeSat;
  - (d) On a L1 launch azimuth of 163 degrees; and
  - (e) According to the launch vehicle, launch vehicle systems, flight profile, and safety management program represented in the VO application as of the date of this order, and any amendments to the license application approved by the FAA, in writing.

4. Verification Test Data:

No less than two weeks prior to flight, VO must provide the FAA for review and acceptance:


- (a) Test data identified in the VO license application that verifies risk mitigation and elimination measures for captive-carry and launch operations.
- (b) System test results from flight testing of the fully integrated space flight launch system.

5. Autonomous Flight Safety System (AFSS) Testing:

No less than one week prior to flight, VO must provide the FAA with the following for review and acceptance:

- (a) Valve Acceptance Test Reports
- (b) Flight Computer Qualification Test Report
- (c) Flight Computer Acceptance Test Report
- (d) End-to-End Test Plan and Procedures

OFFICE OF COMMERCIAL SPACE TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

By:   
Kenneth Wong, Manager  
Licensing and Evaluation Division

Issued: June 29, 2018  
Effective: June 29, 2018

**License Order No. LRLS 18-106C**

OFFICE OF  
COMMERCIAL SPACE TRANSPORTATION  
LICENSE ORDER REGARDING

**FINANCIAL RESPONSIBILITY REQUIREMENTS**

UNDER LICENSE NO. LRLS 18-106  
ISSUED TO


VIRGIN ORBIT, LLC

1. Authority: This Order is issued to Virgin Orbit, LLC (referred to as VO), under 51 U.S.C. subtitle V, chapter 509, and 14 C.F.R. part 440.
2. Purpose: This Order modifies License No. LRLS 18-106 issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation, by prescribing financial responsibility requirements for licensed launch activities in accordance with 14 C.F.R. part 440.

Definitions: For purposes of this Order, "licensed launch activities" shall mean activities authorized by the License. Other terms used in this Order are defined in accordance with 14 C.F.R. § 440.3.

3. Liability Insurance: VO shall maintain a policy or policies of liability insurance (or otherwise demonstrate financial responsibility) in accordance with 14 C.F.R. § 440.9(b) in the following amounts:
  - (a) Sixty-Four Million Dollars (\$64,000,000) for covered claims resulting from a flight, commencing upon take-off of the Boeing 747-400 carrier aircraft from Mojave Air and Space Port.
  - (b) Three Million Dollars (\$3,000,000) for covered claims resulting from pre-flight ground operations performed at Mojave Air and Space Port.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

By:   
Kenneth Wong, Manager  
Licensing and Evaluation Division

Issued: June 29, 2018  
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