Commercial Space Transportation Experimental Permit

Experimental Permit Number: EP 12-007 (Rev 2)

Scaled Composites, 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 launches.

General. The permittee is authorized to conduct:

(1) An unlimited number of launches of SpaceShipTwo utilizing WhiteKnightTwo within the operating area identified by permit order A; and

(2) Pre-flight and post-flight ground operations at Mojave Air and Space Port associated with permitted flights of SpaceShipTwo utilizing WhiteKnightTwo.

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

The permittee 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 experimental permit.

US Department
of Transportation
Federal Aviation Administration

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

Original Issued On: May 23, 2012
Revision 2 Issued On: May 21, 2014
Revision 2 Effective On: May 23, 2014

Kenneth Wong

Manager, Licensing and Evaluation Division

Revision History

Original Permit - Issued May 23, 2012

Revision 1 - Issued May 22, 2013

1) Redesignated Experimental Permit Number: EP 12-007 with "(Rev 1)" following.
2) Changed Effective On: May 23, 2012 to Revision 1 Effective On: May 23, 2013.

Revision 2 - Issued May 21, 2014

1) Redesignated Experimental Permit Number: EP 12-007 "(Rev 1)" with EP 12-007 "(Rev 2)".
2) Changed Revision 1 Effective On: May 23, 2013 to Revision 2 Effective On: May 23, 2014.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
EXPERIMENTAL PERMIT ORDER REGARDING

REUSABLE SUBORBITAL ROCKET LAUNCHES

Under Experimental Permit No. EP 12-007
Issued to

SCALED COMPOSITES, LLC

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1. Authority: This Order is issued to Scaled Composites, LLC (Scaled) under 51 U.S.C. Subtitle V, Chapter 509 and 14 C.F.R Ch. III.

2. Purpose: This Order modifies Experimental Permit No. EP 12-007 (the Permit) initially issued on May 23, 2012, by the Federal Aviation Administration's Office of Commercial Space Transportation (Office), authorizing Scaled to conduct launches of the SpaceShipTwo (SS2) reusable suborbital rocket utilizing the WhiteKnightTwo (WK2) carrier aircraft. This Order prescribes definitions and conditions applicable to each launch conducted by Scaled under the Permit.

3. Definitions: For purposes of the Permit and any orders issued by the Office modifying the Permit, the following definitions apply:

   (a) "Pre-flight ground operations" begin with pressurizing and ground-enabling SS2's propulsion system by inserting a propulsion Insert Before Flight Device as identified in the Permit application.

   (b) "Flight" means the flight of SS2 commencing upon take-off of WK2 from Mojave Air and Space Port with the intent to launch SS2. For SS2 and WK2 flight ends upon wheels stopping after landing.

   (c) "Post-flight operations" begin when SS2's wheels stop after landing and end after Scaled returns the vehicle to a safe condition.

4. Safety Clear Zone:

   (a) During pressurizing and ground-enabling of the SS2 propulsion system, Scaled must establish a 1250 foot radius safety clear zone.

   (b) During post-flight operations, Scaled must establish a 500 foot radius safety clear zone around SS2 in the runway area until Scaled verifies that no hazard exists. If a hazard exists, Scaled must move SS2 to a Mojave Air and Space Port Mission Preparation Area, as identified in the East Kern Airport District launch site operator license application, or establish a safety clear zone as identified in Scaled's Permit application.

5. Operating Area:

   The operating area is R-2508 Complex, which is restricted airspace described in a Letter of Agreement among Scaled, the R-2508 Complex Control Board, and the Air Force Flight Test Center.

6. Allowable Design Changes:

   In accordance with 14 C.F.R § 437.85(a), Scaled may make the following design changes to SS2 without invalidating the Permit provided that Scaled does not alter its demonstration of compliance with 14 C.F.R §§ 437.55, 437.57, 437.59, and 437.61. Scaled may:

   (1) Change sensor types, ranges, or sensor locations.
   (2) Change pressures in bottles or actuators within the design limits of those devices.
   (3) Tune control system components as indicated by flight test.
   (4) Change the quantity, composition, and location of thermal protection.
   (5) Change window heating system design and implementation.
   (6) Change electrical actuator type or location.

7. Trajectory Data:

   (a) Provide post-flight to the FAA planned and as flown trajectory data for SS2 that consist of
      - Position;
      - Velocity; and
      - When each key flight safety event occurred;

   (b) Upon request, provide the same trajectory data for WK2 post release of SS2.

8. Compliance With Aviation Requirements:

   During launch operations WK2 must hold a valid 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.

9. The control tower at the Mojave Air and Space Port must be in operation and Class D airspace in effect during launch.

10. Responsibility and Authority of SS2 Pilot In Command:

    a. Prior to flight, Scaled must designate the pilot in command of the SS2 vehicle who is directly responsible for, and is the final authority as to, the operation of that vehicle.

    b. In an in-flight emergency requiring immediate action, the pilot in command may deviate from any requirement of this Permit and Order to the extent required to meet that emergency.

    c. Each pilot in command who deviates from a requirement of this Permit must, upon request, send a written report of that deviation to the FAA's Licensing and Evaluation Division Manager.

11. Permit Term: The term of the Permit is one year from the effective date of the Permit.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By: Kenneth Wong

Kenneth Wong, Manager
Licensing and Evaluation Division

Issued: May 21, 2014

Effective: May 23, 2014

Revision History:

Original Permit Order - Issued May 23, 2012

Revision 1 - Issued May 22, 2013

1) Redesignated Experimental Permit Number: EP 12-007A with "(Rev 1)" following.
2) In paragraph 2, replaced "issued concurrently" with "initially issued on May 23, 2012,".
3) Eliminated paragraphs 5. Vehicle Inspection, 7. Key Flight Safety Events, and 8. Hazard Analysis because these conditions were met and approved by the FAA on April 23, 2013. Renumbered paragraphs 6 and 9 through 13.
4) Added new paragraph 7. Trajectory Data.
5) Changed Effective: May 23, 2012 to Effective: May 23, 2013.

Revision 2 - Issued May 21, 2014

1) Redesignated Experimental Permit Number: EP 12-007A "(Rev 1)" with EP 12-007A "(Rev 2)".
2) Changed Effective: May 23, 2013 to Effective: May 23, 2014.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
EXPERIMENTAL PERMIT ORDER REGARDING

FINANCIAL RESPONSIBILITY REQUIREMENTS

Under Experimental Permit No. EP 12-007
Issued to

SCALED COMPOSITES, LLC

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1. Authority: This Order is issued to Scaled Composites, LLC (Scaled) under 51 U.S.C. Subtitle V, Chapter 509 and 14 C.F.R. part 440.

2. Purpose: This Order modifies Experimental Permit No. EP 12-007 (the Permit) initially issued on May 23, 2012, by the Federal Aviation Administration's Office of Commercial Space Transportation, by prescribing financial responsibility requirements for permitted activities in accordance with 14 C.F.R. part 440.

3. Definitions: For the purposes of this order, "permitted launch activities" means activities authorized by the Permit. Other terms used in this Order are defined in accordance with 14 C.F.R. § 440.3.

4. Liability Insurance: For each launch of SpaceShipTwo utilizing WhiteKnightTwo, Scaled must maintain liability insurance (or otherwise demonstrate financial responsibility) in accordance with 14 C.F.R. § 440.9(b). The liability insurance policy or policies must provide at least $9,000,000 for covered claims resulting from permitted activities commencing from Mojave Air and Space Port as described in Experimental Permit Order No. EP 12-007A (Rev 2).

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By: Kenneth Wong
Kenneth Wong, Manager
Licensing and Evaluation Division

Issued: May 21, 2014

Effective: May 23, 2014

Revision History:

Original License Order - Issued May 23, 2012

Revision 1 - Issued May 22, 2013
1) Redesignated Experimental Permit Order No. EP 12-007B with "(Rev 1)" following.
2) In paragraph 2, replaced "issued concurrently" with "initially issued on May 23, 2012,".
3) Changed Effective: May 23, 2012 to Effective: May 23, 2013.

Revision 2 - Issued May 21, 2014
1) Redesignated Experimental Permit Order No. EP 12-007B (Rev 1) with EP 12-007B (Rev 2).
2) In paragraph 4, replaced EP 12-007A (Rev 1) with EP 12-007A (Rev 2).
3) Changed Effective: May 23, 2013 to Effective: May 23, 2014.