
**Commercial
Space
Transportation
Experimental Permit**

Experimental Permit Number: EP 12-008

**Space Exploration
Technologies**

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 flights of the Grasshopper Reusable Launch Vehicle within the operating area identified by permit order A; and
- (2) Pre-flight and post-flight ground operations at McGregor Test Site associated with flights of the Grasshopper Reusable Launch Vehicle.

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

Issued On: October 18, 2012

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Manager, Licensing & Evaluation Division

Experimental Permit Order No. EP 12-008A

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
EXPERIMENTAL PERMIT ORDER REGARDING

REUSABLE SUBORBITAL ROCKET LAUNCHES

Under Experimental Permit No. EP 12-008
Issued to

SPACE EXPLORATION TECHNOLOGIES

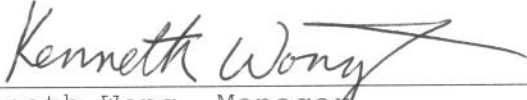
1. Authority: This Order is issued to Space Exploration Technologies (SpaceX) under 51 U.S.C. Subtitle V, Chapter 509 and 14 C.F.R Ch. III.
2. Purpose: This Order modifies Experimental Permit No. EP 12-008 (the Permit) issued concurrently by the Federal Aviation Administration's Office of Commercial Space Transportation (Office), authorizing SpaceX to conduct launches of its Grasshopper reusable launch vehicle. This Order prescribes definitions and conditions applicable to each launch conducted by SpaceX 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 Grasshopper's propellant tanks.
 - (b) "Post-flight operations" begin when Grasshopper has landed on the pad and end after SpaceX returns the vehicle to a safe condition. Post-flight ground operations include depressurization and venting of hazardous materials from the vehicle.
4. Safety Clear Zone:
 - (a) During pressurizing and propellant loading of the Grasshopper propulsion system, SpaceX must establish a safety clear zone with a 3000 foot radius from the launch point at 31° 23' 17.17" North latitude and 97° 28' 8.58" West longitude.
 - (b) During post-flight operations, SpaceX must establish a 3000 foot radius safety clear zone around

Experimental Permit Order No. EP 12-008A

Grasshopper on the landing pad until SpaceX verifies that no hazard exists.

5. Operating Area: "Operating Area" means a cylindrical region with a radius of 3000 feet from the launch point.
6. Altitude: SpaceX may operate the Grasshopper vehicle to an altitude that does not exceed 2500 feet AGL, in accordance with its application.
7. Thrust Termination Threshold: SpaceX must terminate Grasshopper's thrust if the vehicle's vacuum instantaneous impact point (IIP) exceeds 2100 feet from the launch point.
8. Testing Results: SpaceX must provide the FAA the results of SpaceX's hardware-in-the-loop (HITL) testing for analyzing the conditions of a proposed flight profile. SpaceX may proceed with a proposed flight profile after receiving written confirmation from the FAA that the HITL testing results are acceptable.
9. Distant Focusing Overpressure Mitigation: SpaceX must provide a plan to mitigate for distant focusing overpressure (DFO) for any flight profile above 350 feet AGL. SpaceX may proceed with a proposed flight profile after receiving written confirmation from the FAA that the DFO plan is acceptable.
10. 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, Manager
Licensing and Evaluation Division

Issued: October 18, 2012

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Experimental Permit Order No. EP 12-008B

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
EXPERIMENTAL PERMIT ORDER REGARDING

FINANCIAL RESPONSIBILITY REQUIREMENTS


Under Experimental Permit No. EP 12-008
Issued to

SPACE EXPLORATION TECHNOLOGIES

1. Authority: This Order is issued to Space Exploration Technologies (SpaceX) 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 12-008 (the Permit) issued concurrently 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: SpaceX must 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 amount of Three Million Dollars (\$3,000,000) for covered claims resulting from permitted activities performed at McGregor Test Site as described in Experimental Permit Order No. EP 12-008A for each launch of Grasshopper.

OFFICE OF COMMERCIAL SPACE TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

By:



Kenneth Wong, Manager
Licensing and Evaluation Division

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