
REGISTRATION FORM

2009 NORTHROP GRUMMAN LUNAR LANDER CHALLENGE

By completing and submitting this form, the Appendices A-G, and the Master Team Agreement and its exhibits, and by posting a required payment to the "X" PRIZE Foundation, Inc., application for Registration of your Vehicle for the Northrop Grumman Lunar Lander Challenge shall be considered complete.

A completed application does not guarantee the acceptance of your participation in the Northrop Grumman Lunar Lander Challenge. The X PRIZE Foundation expressly reserves to the right to deny any application to participate in the Challenge for any reason.

Application Deadline for the 2009 Northrop Grumman Lunar Lander Challenge: 45 days prior to the Team's requested Prize Winning Attempt Visit. No new requests will be accepted after September 17, 2009.

All applications must be accompanied by a \$7,500 registration fee for each request Prize Winning Attempt Visit. All registration fees are non-refundable, except in cases where registration is denied. If an application is denied, the registration fee shall be refunded without payment of interest.

All applications shall be reviewed and responded to no later than two weeks after receipt. Until such point as an application for registration has been officially accepted or denied, neither the applicant nor the X PRIZE Foundation shall make public declaration of Registration in the Northrop Grumman Lunar Lander Challenge.

No Team may register more than two Vehicles total in the Northrop Grumman Lunar Lander Challenge in any year of competition. If a Team elects to register two Vehicles, they may be competed either separately in each Competition Level, or both in the same Competition Level. In the case of separate but identical Vehicles brought by a Team with accepted registrations in each Competition Level, once a given Vehicle has been flown in a given Competition Level, it shall be considered locked into that Competition Level.

Registration for the Northrop Grumman Lunar Lander Challenge does not prevent registration in any other Challenge conducted by the X PRIZE Foundation beyond the restrictions noted above, unless explicitly noted in the rules for that Challenge. However, no special consideration shall be granted to Teams entering in multiple Challenges.

SCHEDULING PRIZE WINNING ATTEMPT VISITS

- Each Team may register for **no more than two Prize Winning Attempt Visits per Vehicle** in 2009.
- Each Team may register **no more than two Vehicles** in 2009.
- Each Team will be allowed **no more than two days per Prize Winning Attempt Visit** without express written permission from the X PRIZE Foundation, to be granted at the X PRIZE Foundation's sole discretion.
- Each Team **must file a registration form and pay the \$7,500 registration fee for each Prize Winning Attempt Visit**. A Team may fly multiple Vehicles within the same Prize Winning Attempt Visit. If multiple Vehicles will be flown by the Team within a single Prize Winning Attempt Visit, two registration forms must be filed, but only a single \$7,500 registration fee must be filed for that Prize Winning Attempt Visit.
- All Prize Winning Attempt Visits must take place between **July 20, 2009 and October 31, 2009**.
- All Prize Winning Attempt Visits must take place within the United States of America, excluding territories.
- If multiple Teams request the same Prize Winning Attempt Visit dates, priority will be given to the Team whose complete registration package—including the \$7500 fee is received first. If multiple complete registration packages requesting the same date or dates are received at the same time, XPF will assign dates at its sole discretion, taking into account travel and other relevant logistics.
- Whenever a Prize Winning Attempt Visit is scheduled, XPF will publicly announce the date and the Competition Level(s) of the Visit.
- Whenever a Prize Winning Attempt Visit results in a Prize Winning Attempt that successfully meets all of the requirements for the Northrop Grumman Lunar Lander Challenge, XPF will publish the date, the Competition Level(s), and the achieved Mean Landing Accuracy.

APPENDIX A

TEAM NAME PACKAGE

Team Name: _____

Team Leader Name: _____

Vehicle Name: _____

Desired Level of Competition: _____

Date(s) of Desired Flight Attempt Visit: _____

Location of Desired Flight Attempt Visit: _____

Team Leader Signature: _____

Date: _____

APPENDIX B

VEHICLE DATA PACKAGE

The following information will be used by the X PRIZE Foundation to prepare for the Lunar Lander Challenge event. Data will be used to ensure the safe operation of the Vehicle in proximity to other competitors, other X PRIZE Foundation events, staff, related personnel, and other parties. Additionally, data may be used to promote the event and to educate the public about the Lunar Lander Challenge, the underlying technical issues, and related science, technology, engineering, and mathematics issues. **Fields marked with an asterisk (*) shall not be publicly listed, except in aggregate form using data from all registered competitors.**

Additionally, information provided in this Appendix B may be provided to the prize purse provider, NASA. Fields marked with an asterisk (*) shall only be provided to NASA in aggregate form using data from all registered competitors.

Proprietary information, including any intellectual property the Registrant desires to keep confidential, must be clearly marked as such.

Please note that this registration form and data package does not in any way substitute for an application or submission to the Federal Aviation Administration or any other regulatory body if applicable. The Registrant is solely responsible for all coordination and interaction with any regulatory body.

TEAM INFORMATION

- Team name:
- Vehicle name(s):
- Team Headquarters location (complete address):
- Prize Winning Attempt Visit location (complete address):
- Team leader name:
- Team citizenship:
- Team member names:
- Team logo (attached in print-quality digital format):
- Team website URL (if applicable):
- Team blog URL (if applicable):

- Team pictures, including group photos and photos of key members (attached in print-quality digital format):
- Chief point of contact for XPF (name, phone number, email address)*:
- Chief point of contact for the media (name, phone number, email address):
- 100-200 word description of Team that describes who you are and graphically depicts your entry:
- Original quote, with attribution, on the importance of the Lunar Lander Challenge:

VEHICLE AND OPERATIONS INFORMATION.

PLEASE SPECIFY UNITS WHEREVER APPLICABLE

- Pictures / drawings of ship design (attached in print-quality digital format):
- Description of Vehicle transport and recovery method (<500 words):
- Description of current status of FAA Application(s)(<500 words. Please attach any current Experimental Permit applications, if applicable)*:
- Description of plans for compliance with 14 CFR part 101, if applicable (<500 words)*:
- Description of Flight Demonstration plan (e.g. operations, events, timelines, *et cetera*. < 500 words)*:
- Approximate empty weight of the Vehicle (in pounds):
- Approximate gross weight of the Vehicle (in pounds):
- Height and diameter of Vehicle (in feet):
- Scaled drawing of Vehicle including plan and cross-sectional views (attached in print-quality digital format)*:
- Description of propulsion system(s) (<1000 words)*. Should include:
 - Approximate engine thrust at ignition (in pounds-force):
 - Number of Air breathing engines (Air breathing engines are not permitted in the Lunar Lander Challenge, except in the case of abort):
 - Number of rocket engines (define by propellant):
 - Approximate quantities and types of fuel and oxidizer (in pounds) and MSDS for each:

- Approximate quantities of any other gaseous, liquid, or powdered materials (in pounds) and MSDS for each
- Description of Flight Control Systems (<1000 words)*:
- Description of Avionics and guidance systems (<1000 words) *:
- Maximum proposed altitude of the Vehicle (in feet):
- Ascent rate of the Vehicle (in feet per second):
- Descent rate of the Vehicle (in feet per second):
- Description of the Operational Procedures (<5000 words, plus any desired attachments) *. Should include:
 - Pre-flight and post-flight operations check list(s)
 - Operating area containment
 - Transportation of the Vehicle to the site of the Prize Winning Attempt Visit?
 - Transportation of the Vehicle from the Staging Area (if applicable) to Point A?
 - Expected post-flight servicing of the Vehicle at Point B
 - Abort mechanism(s) and procedures for pre-flight, in flight, or post-flight emergencies
 - Hazard analysis
 - Maximum acceleration forces
 - Maximum speed of the Vehicle (in feet per second)
 - Ground based equipment
 - Fueling operations and fuel transportation
 - Mishap and Emergency Response scenarios
 - Airspace closure procedures
- Describe the types and quantities of propellants and other gaseous and liquid materials that would be used in the ground support operations. (MSDS information may be required by request) *:

APPENDIX C

CHALLENGE IMPACT DATA

The following data shall be used by the X PRIZE Foundation to assess the total impact of the Lunar Lander Challenge on individual competitors and on the industry as a whole. **All data shall be kept confidential by XPF and not shared with other organizations; however, aggregate responses may be used in presentations to the funding agencies or to the public.**

- How much money have you spent in pursuit of the Northrop Grumman Lunar Lander Challenge to date (estimate, 2006 through present)?
- What is the estimated cash value of in-kind donations or support you have received to aid in your pursuit of the Northrop Grumman Lunar Lander Challenge to date (estimate, 2006 through present)?
- What is the estimated total of person-hours, whether paid or volunteered, that you have dedicated to your pursuit of the Northrop Grumman Lunar Lander Challenge to date (estimate, 2006 through present)?
- How much additional money do you expect to send in pursuit of the Northrop Grumman Lunar Lander Challenge (estimate, present through October 31, 2009)?
- What is the estimated cash value of in-kind donations or support you expect to receive to aid in your pursuit of the Northrop Grumman Lunar Lander Challenge (estimate, present through October 31, 2009)?
- What is the estimated total of person-hours, whether paid or volunteered, that you expect to dedicate to your pursuit of the Northrop Grumman Lunar Lander Challenge (estimate, present through October 31, 2009)?
- If you were to win the Challenge, would you continue to pursue this line of business and/or technical development? If so, how? (<500 words) in what ways might you proceed to generate revenue from your success?
- If you do not win the Challenge, do you intend to continue pursuing this line of business and/or technical development? If so, how? (<500 words)

APPENDIX D

FAA / XPF MUTUAL DISCLOSURE LETTER

I, the undersigned, as a representative of TEAM, hereby authorize the Federal Aviation Administration to disclose to the X PRIZE Foundation, its representatives, employees, contractors and subcontractors, all information and materials that I or TEAM provide to the FAA in order to obtain a license or permit, or any relevant documentation already submitted to the FAA for an license or permit for my Vehicle.

Furthermore, I, the undersigned, as a representative of TEAM, hereby authorize the X PRIZE Foundation to disclose to the Federal Aviation Administration all information and materials, excepting information related to finances and business plans, that I or TEAM provide to the XPF in order to register in this Challenge.

Signature: _____

Name: _____

Date: _____

TEAM Name: _____

APPENDIX E

SPORTSMANSHIP PLEDGE

I, the undersigned, as a representative of TEAM, hereby agree to abide by all decisions made by the Official Judges of this Challenge regarding my or any other Team's involvement in or potential victory in this Challenge.

Furthermore, I, the undersigned, as a representative of TEAM, hereby pledge to maintain a spirit of good sportsmanship with my fellow competitors, the X PRIZE Foundation, the Official Judges, and other partners involved in this Challenge.

Signature: _____

Name: _____

Date: _____

TEAM Name: _____

APPENDIX F

ACKNOWLEDGEMENT OF RESPONSIBILITIES

I, the undersigned, as a representative of TEAM, hereby acknowledge my TEAM's responsibility to make arrangements for, among other responsibilities, our own insurance; own Experimental Permit or other required permit or license; launch operator agreement or agreement(s); propellant and other consumable purchase; and transportation and storage of the Vehicle.

Furthermore, I, the undersigned, as a representative of TEAM, hereby acknowledge that any assistance with the above rendered by the X PRIZE Foundation, the Official Judges, or other partners involved in this Challenge shall not relieve me of this responsibility.

Signature: _____

Name: _____

Date: _____

TEAM Name: _____

APPENDIX G

SUPPLEMENTAL UPDATE FORM

This update must be completed and submitted to the X PRIZE Foundation seven days prior to the Prize Winning Attempt Visit. Fields marked with an asterisk (*) shall not be publicly listed, except in aggregate form using data from all registered competitors.

TECHNICAL INFORMATION

- Current status of FAA Application(s)* (<500 words):
- Any changes to the Vehicle design? (<500 words, plus graphics or attachments as applicable):
- Any changes to the hazards posed by preparation or operation of the Vehicle? (<2500 words, with graphics or attachments as applicable)
- Any significant changes to the operations plan, including abort procedures* (<2500 words, with graphics or attachments as applicable)

FINANCIAL INFORMATION

- How much money have you spent in pursuit of the Northrop Grumman Lunar Lander Challenge to date (estimate, 2006 through present)?
- What is the estimated cash value of in-kind donations or support you have received to aid in your pursuit of the Northrop Grumman Lunar Lander Challenge to date (estimate, 2006 through present)?
- What is the estimated total of person-hours, whether paid or volunteered, that you have dedicated to your pursuit of the Northrop Grumman Lunar Lander Challenge to date (estimate, 2006 through present)?
- How much additional money do you expect to send in pursuit of the Northrop Grumman Lunar Lander Challenge (estimate, present through October 31, 2009)?
- What is the estimated cash value of in-kind donations or support you expect to receive to aid in your pursuit of the Northrop Grumman Lunar Lander Challenge (estimate, present through October 31, 2009)?

- What is the estimated total of person-hours, whether paid or volunteered, that you expect to dedicate to your pursuit of the Northrop Grumman Lunar Lander Challenge (estimate, present through October 31, 2009)?

CERTIFICATIONS

I, the undersigned, as a representative of TEAM, hereby certify and warrantee that the Team and/or Vehicle has received all appropriate licenses, waivers, or permits from the applicable regulatory bodies, including, if necessary, the Challenge Venue site and the Federal Aviation Administration. I hereby agree to comply with any reasonable request issued by the X PRIZE Foundation for related information.

(Signature of qualified representative of Team)

I, the undersigned, as a representative of TEAM, hereby certify and warrantee that the Team and/or Vehicle is in full compliance with Title 14 of the Code of Federal Regulations (CFR) part 101. I hereby agree to comply with any reasonable request issued by the X PRIZE Foundation for related information.

(Signature of qualified representative of Team)

I, the undersigned, as a representative of TEAM, hereby certify and warrantee that I have provided to the X PRIZE Foundation information that is true and, to the best of my ability, complete regarding the hazards associated with the preparation and/or flight of the Vehicle and regarding the Flight Safety System or similar systems used to mitigate those hazards. I hereby agree to comply with any reasonable request issued by the X PRIZE Foundation for related information.

(Signature of qualified representative of Team)

I, the undersigned, as a representative of TEAM, hereby certify and warrantee that the Challenge Data System is installed and functional. I hereby agree to comply with any reasonable request issued by the X PRIZE Foundation for related information.

(Signature of qualified representative of Team)

I, the undersigned, as a representative of TEAM, hereby certify and warrantee that the Point A and Point B surfaces constructed or arranged for this Prize Winning Attempt comply with the requirements given by the Team Agreement. I hereby agree to comply with any reasonable request issued by the X PRIZE Foundation for related information.

(Signature of qualified representative of Team)