TEAM AMERICA ROCKETRY CHALLENGE 2019
QUALIFYING/SELECTION FLIGHT DEMONSTRATION

TEAM'S SCHOOL/ORGANIZATION: _____

AIA TEAM NUMBER: _____ ADULT ADVISOR: _____

DATE OF THIS FLIGHT: _____ QUALIFICATION ATTEMPT # (Circle) 1 2 3

MINIMUM FLIGHT REQUIREMENTS (ALL MUST BE CIRCLED "YES" OR THE FLIGHT IS DQ)

Did this rocket weigh less than 650 gm at takeoff, with eggs and motors, and was it 650mm or more long? YES / NO

Did it use two separating parts with the part containing the eggs and altimeter equipped with two or more parachutes that were the same shape and within 50 mm (2 inches) of the same diameter? YES / NO

Did it use motors from the TARC approved list containing a total of no more than 80 N-sec total impulse? YES / NO

Did it contain three Grade A large, raw hen's eggs, and a TARC-approved altimeter? YES / NO

Did this rocket make a safe flight and recovery under the TARC 2019 rules & NAR Safety Code? YES / NO

Did the payload capsule land with 2 or more parachutes out of the body and without any human intervention? YES / NO

Did all 3 of the eggs carried by the rocket remain uncracked after the flight? YES / NO

SCORING

TIMER # 1 (NAR OBSERVER): _____ . _____
SEC HUNDREDTHS

TIMER # 2 (OTHER ADULT): _____ . _____
SEC HUNDREDTHS

OR

AVERAGE TIME: _____ . _____
SEC HUNDREDTHS

NEGATIVES)
ALTIMETER ALTITUDE: _____ FEET

EXCESS ABOVE 46.00 SEC: ___ . ____

MULTIPLY EXCESS BY 4: ____ . ____

SHORTFALL BELOW 43.00 SEC: ___ . ____ +

MULTIPLY SHORTFALL BY 4: ___ . ____ +

DIFFERENCE FROM 856 FEET: _____ +
(NO

FINAL SCORE (SUM) ____ . ____
Put only "DQ" if any answers above are "no"

SUPERVISING TEACHER/ADULT CERTIFICATION

I certify that the student members of this team designed, built, and flew this rocket without my assistance and, to the best of my knowledge, without the assistance of any other adult or any person not on the team. I also certify that no more than the allowed number of official qualification flight attempts were made by this team, and that the team information on file at AIA is current. I understand that team membership can no longer be changed and only team members on file at AIA with valid parent consent forms are eligible to receive prizes.

SIGNATURE: _____ PRINT NAME: _____

ADULT N.A.R. MEMBER OBSERVER CERTIFICATION

I certify that I am a Senior NAR member who personally observed this flight, and the above initials and scores are mine, based on my observations. I certify that I am not related to any team members or affiliated with their school or non-profit organization, that this flight was conducted in compliance with the rules of the Team America competition, and that this flight was declared to me to be an official qualification flight before its liftoff.

SIGNATURE: _____ PRINT NAME: _____PHONE:_____

NAR NUMBER: _____ CITY, STATE: _____ EMAIL: _____

SUBMIT USING ONLINE PORTAL AT PORTAL.ROCKETCONTEST.ORG (Successful flights only)
OR E-MAIL SCANNED COPY TO QualificationFlights@aia-aerospace.org
NO LATER THAN MIDNIGHT (EST) APRIL 8, 2019****
Team sends in form if flight successful, NAR observer sends in form for unsuccessful flights.

GUIDELINES FOR N.A.R. OFFICIAL FLIGHT OBSERVERS

The TARC program and the NAR count on the local NAR flight observers to be impartial and honest in the way that they score official TARC qualification flights, and to understand and enforce the rules and requirements consistently. Here are some guidelines for this duty:

1. Be an NAR member. You must be a current dues-paid adult (age 21 or older) member of the NAR as of the day of a flight in order to observe a flight. Membership in other organizations does not count. This is your responsibility to get right; the team trusts you and has no way to know your status. Joining or renewing online the morning of the flight, before the flight, is OK. We check observer membership status in the NAR database for every score report.

2. **Be impartial.** You cannot be related to any member of the team or employed by the organization that sponsored the team. If you are their mentor (which is permissible, but only if there is no other choice) you must not bend any rules for "your" team.

3. **Report all flights.** Teams only get three official qualification flight attempts. Any attempt must be reported to AIA except as noted in #3 below: by the team if successful, by the NAR observer if a DQ. No do-overs due to disappointing performance, weather issues, etc.

4. **All flights count.** Qualification flights must be declared before motor ignition, and must be counted and reported to AIA if the motor ignites, with the following exceptions:
    1. Flights that stick on the launch pad and fire the motor without lifting off do not count.
    2. Flights that experience a catastrophic motor failure do not count. Such failures are explosions that blow out either end closure or rupture the casing. Inaccurate delay times, "chuffing" ignition start-ups due to igniter mis-installation, or failures of reloadable motors due to user mis-assembly are not catastrophic failures and flights that experience these still count as official attempts.
    3. Flights that land in a place too dangerous for recovery or that drift away and are not recovered on the day of flight do not count, and cannot subsequently be counted even if found, once this basis for non-counting has been claimed by the team or declared (for safety reasons) by the NAR observer.

5. **Time accurately**. Two people must time the flight, using digital stopwatches accurate to 0.01 seconds, and one of these timers must be the official NAR observer. Timing is from first motion on the pad until the moment the first part of the rocket touches the ground (or tree or building!) or is lost from direct visibility due to distance, terrain, trees, etc. If one timer's stopwatch malfunctions, use the single remaining time.

6. **Report the apogee altitude based on the altimeter's external signal (beeps or flashes) only**. Apogee altitudes interpreted off a digital download to a computer post-flight can be used for flight analysis, but the official altitude score must only be what the altimeter beeps or flashes.

7. **Disqualify if you have to**. If a rocket drops off a part in flight, goes unstable, streamlines in dangerously on recovery, or cracks an egg then the flight must be disqualified. The NAR observer takes custody of the score report for such flights and must send it in to AIA.