

NAR JUNIOR HIGH POWER PARTICIPATION PROGRAM APPLICATION

APPLICANT INFORMATION *(Completed by Applicant and Adult Guardian)*

Name _____
First Last

Address _____

City _____ State _____ Zip Code _____

Birth Date ____/____/____ Phone (____) _____ NAR Number _____ Expiration Date _____
Month Day Year

I, _____, certify that I am a member in good standing of the National Association of Rocketry. I am 14 years of age or older. I understand that I must comply with all applicable federal, state, and local laws or regulations during and after this flight attempt.

Signed _____ Date _____

I, _____, declare that I am a legally recognized adult guardian of the above NAR member, and authorize their participation in this rocketry activity. I understand that I must ensure that all applicable federal, state, and local laws or regulations are followed during this flight and subsequent flights, until the flier reaches the age of 18.

Signed _____ Date _____

Form must be signed by Certification Applicant, Adult Guardian, and Certification Team.

FLIGHT INFORMATION *(Completed by Flier of Record)*

Date _____ Location _____ Motor Used _____

NAR Certified Flier of Record _____ NAR Number _____

CERTIFICATION CHECKLIST *(Completed by the Certification Team)*

Preflight: Level 1 Written Exam passed (within one year) on ____/____/____

Motor is certified FAA COA activated (if required) Safety checklist completed (see back)

Flight: Flight was stable Recovery system deployed Safe Recovery

Post Flight: Verify that no major damage is present. Minor impact damage or "zipper" is acceptable.

Verify motor present

Successful Flight? Yes No

CERTIFICATION AFFIDAVIT *(Successful flights only, completed by the Certification Team)*

The undersigned, being members of the National Association of Rocketry have witnessed a flight by

_____, NAR Number _____, and the flier has adequately demonstrated the knowledge and skills needed to safely participate in the flight activities of high power rocketry with an installed impulse of up to 640 N-sec. when supervised by an adult flier who is HPR certified at L1 or greater.

Name _____ Signature _____ NAR # _____

Birth Date ____/____/____ Membership Expires ____/____/____ HPR Cert. Level _____

Name _____ Signature _____ NAR # _____

Birth Date ____/____/____ Membership Expires ____/____/____ HPR Cert. Level _____

Form must be signed by Certification Applicant, Adult Guardian, and Certification Team.

NAR JUNIOR HPR PARTICIPATION VERIFICATION

Name _____

NAR Number _____ Certification Date _____

Participation Level: "1"

Witnessed By _____
Authorizing Signature

Witnessed By _____
Authorizing Signature

This card is void 60 days after Certification Date.

Send completed form and exam sheet to the NAR HQ address listed or scan and email them to nar-hq@nar.org.

**National Association
of Rocketry**
P.O. Box 407
Marion, IA 52302

NAR JUNIOR HIGH POWER PARTICIPATION PROGRAM CHECKLIST

<p>Has the rocket model that is being used for the certification attempt been built by the applicant requesting certification?</p>	
<p>Is the nosecone or payload shoulder sufficiently tight to prevent drag separation? The nosecone or payload should not wobble side to side or separate from its own weight. Is a vent hole needed to relieve pressure for high altitude flight? Do stage couplers fit snugly to prevent bending or separation during flight? Is the body tube thickness adequate to withstand high power flight (typically .050 inch walls or thicker)? Is there pre-existing damage which may weaken the model structure (e.g. tube crimps)? Are screws and fasteners tight, if used?</p>	
<p>Are the rail buttons properly sized (for 1010 rail or larger), positioned and aligned correctly, and securely fastened to the airframe? For launch lugs, are they properly sized for the model (typically 1/4 inch dia. or larger), positioned and aligned correctly, and securely fastened to the airframe (taped on lugs are not permitted).</p>	
<p>Is (are) the motor(s) sufficient to safely fly the model? Use motor manufacturer's recommendations or recommended motor lists for similarly sized models as a starting point (Also consider, model weight, configuration, and finish when evaluating motor capabilities). Is (are) the motor(s) either NAR, Tripoli or CAR certified? Motors must be currently certified to be used.</p> <p style="text-align: right;">Low current igniter? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	
<p>Is (are) the rocket motor(s) firmly restrained in the model? Check for engine mount integrity to prevent a "fly through" (Is a thrust ring used?). Check for a motor hook or similar motor restraint. Carefully check taped or friction fit motors for tightness. Ask the modeler what adhesives were used during assembly. Are clusters wired in parallel?</p>	
<p>Are the fins fully secured to the model? Check for looseness or cracking at the fin to body tube junction. "Thru the wall" construction is recommended for high power models. Is the fin material compatible with the motor thrust range (1/8 inch minimum plywood is recommended for high power models)? Ask the modeler how their fins are mounted, what adhesives were used (epoxy is preferred), and what fin material was used. Are the fins mounted parallel to the roll axis of the model? Are any warps present which may cause erratic flight?</p>	
<p>Is the model stable? If stability is in doubt require proof of the CG and CP locations (remember CG should be forward of the CP by approximately 1.0 body tube diameters). Ask the modeler to show the CG and CP locations and how they were determined. Verify that the modeler shows the CG with the motor(s) intended for flight and not a smaller motor or fewer motors (clusters). Ask the modeler to show CG and CP for the complete model and less each stage for a staged model. Require evidence of CP calculations if further doubt exists.</p>	
<p>Will the model "bust" the FAA Certificate of Waiver or Authorization (COA)? Verify compliance by comparing model weight and power with charts/tables (if available) or by calculation. Ask the modeler what the expected performance is and how this determination was made (e.g. computer simulation, similar models).</p>	
<p>Does the recovery system being used follow the requirements of an Active Recovery deployment system required for certifying? Inspect the recovery system. Verify that the shock cord is not cut or frayed and is free of burns. Are the shock cord mounts securely mounted to the model? Are sharp edges present which may cut shock cords, parachute risers, and suspension lines? Is hardware, e.g. swivels, screw eyes, sufficiently strong to withstand recovery loads. If required, perform a pull test on the recovery system. Is parachute protection (e.g. wadding) adequate? Check for parachute damage, e.g. tears, burns, which may spread during recovery.</p>	