RFQ NNL14513681Q
Questions

Please send the 3D file for the interface. IGES file provided that defines the allowable volume. See interface requirements questions below for additional information.
- If no 3D file can be provided, please provide dimensions for the interface envelope image in the solicitation. OP to send.
- What are the interface requirements between the spring bumper and the ogive panels? Bumper to be attached to the ogive panels. IGES file provides interface surfaces. Lower surface is inside of C-channel, and sides are either stiffener longerons (in some bumper locations) or areas where longeron stiffeners can be added as part of the bumper installation. Back surface is the ogive panel IML, and fastening is also allowed there.
- What are the interface requirements between the spring bumper and the CM frame? A single flat carbon phenolic interface pad on the CM OML at the location indicated, with no penetration allowed. Maximum allowed load of 25kips.
- Is an alternative file format such as ParaSolid permissible for the CAD data or must the final delivery be in Creo Parametric 2.0? Yes, ParaSolid is an acceptable format. data files that are importable to Creo (.dxf and .stp file types are listed in RFQ, ParaSolid is another) are acceptable.
- What time is the quote due and in what time zone is this time provided? 7/25/2014 midnight eastern
- How many total bumpers of each type (prototypes, test articles, production) will be required? One item is being requested: a prototype that will be used for testing.
- Of the total number, please specify how many of each type are to be delivered by when. SEE SOW

It seems that there is a preliminary design already in progress. If possible, please provide answers/information for the following questions:
- What is the state of the existing design? Initial design was done in-house at Lockheed Martin Space Systems and tested at NASA LaRC. This design had manufacturing challenges, and weight issues.
- What are the challenges of the existing design? See above
- It appears that the request is focused on weight and performance primarily. Is this correct? Yes
- Is there a current product used in other systems that performs a similar function? Initial market research suggests that there may be suitable spring systems / designs in the submarine field.
- Why is this product not suitable for this function? Each application has a specific design. Desire lighter weight solution.

Design Information
- Will this product be exposed to vacuum? Required to perform at low (near-vacuum) pressures - designed to be used from sea level up to 300,000 ft, which is nominal jettison altitude if abort not required prior to that.
- Is there a shroud or other sleeve that must be used to enclose this device or is bare structure permitted? Bare is permitted.
- Is there an interface mount bolt pattern already established and if so can that be provided? No established bolt pattern for mounting – intent is to match drill bumper bolt pattern to ogive (see previous answer for additional info).
- Are there any specific material, finish, or processing requirements that must be followed and can be provided? When a particular design is chosen, the production items will have to follow space flight hardware quality process and procedures.
- What specifications will be flowed down to the supplier for performance, material finishes, testing (e.g., non-destructive), etc.? Space flight quality programs will have to be followed upon production. This RFQ is for a prototype.

- Will you require any particular fatigue analysis and/or testing requirements? If analysis is required, what is the fatigue cycle spectrum? Environments are summarized in Appendix 3 and specified in the documentation available per the RFQ once ITAR requirements met. Expect to include functional/performance testing, random vibration testing to nominal levels, and analysis to abort levels (desirable of testing if capable to abort levels).
- Do you require any other analyses not specified (e.g., reliability prediction, installation instructions, etc.? No.

Other

- What design reviews will you require and where will they be held? Any reviews intended to be virtual as no travel listed within RFQ. Ostensibly a preliminary design review prior to the final design submission, and then a final design once design package received.
- Will you require weekly status reviews/updates and, if so, will they be by teleconference? None required, but we will be available for guidance via teleconference.