

## REQUEST FOR INFORMATION (RFI) FOR DESIGN & FABRICATION OF LINEAR MOTION DAMPERS

### INTRODUCTION

National Aeronautics and Space Administration (NASA) invites potential offerors to submit a response to this RFI to find interested and qualified sources as well as budgetary and schedule planning information for the design and fabrication of one or more Linear Motion Dampers. The dampers can be of the viscous fluid type or may use other technology. The dampers will be part of a launch tower accessory system (see figure 1. and figure2.). Each damper will provide stabilization and damping to a space vehicle as it rests on a mobile launch platform. The system is ground based, non-flight hardware.

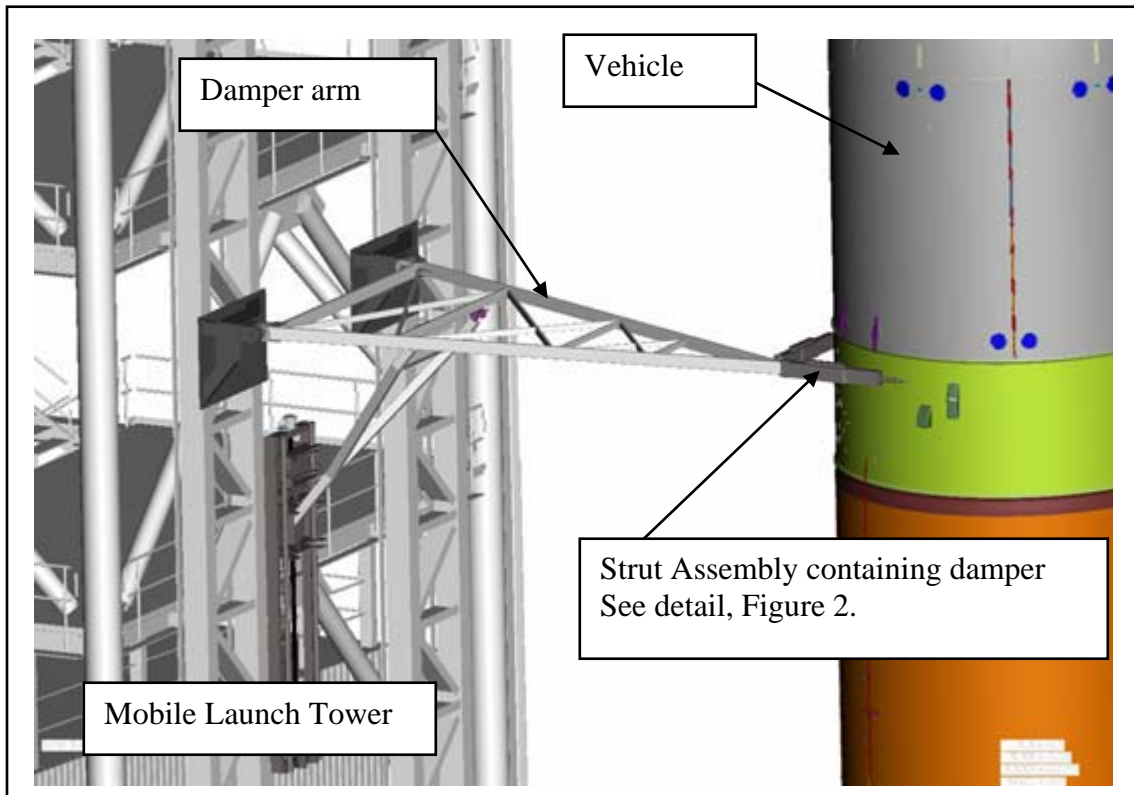
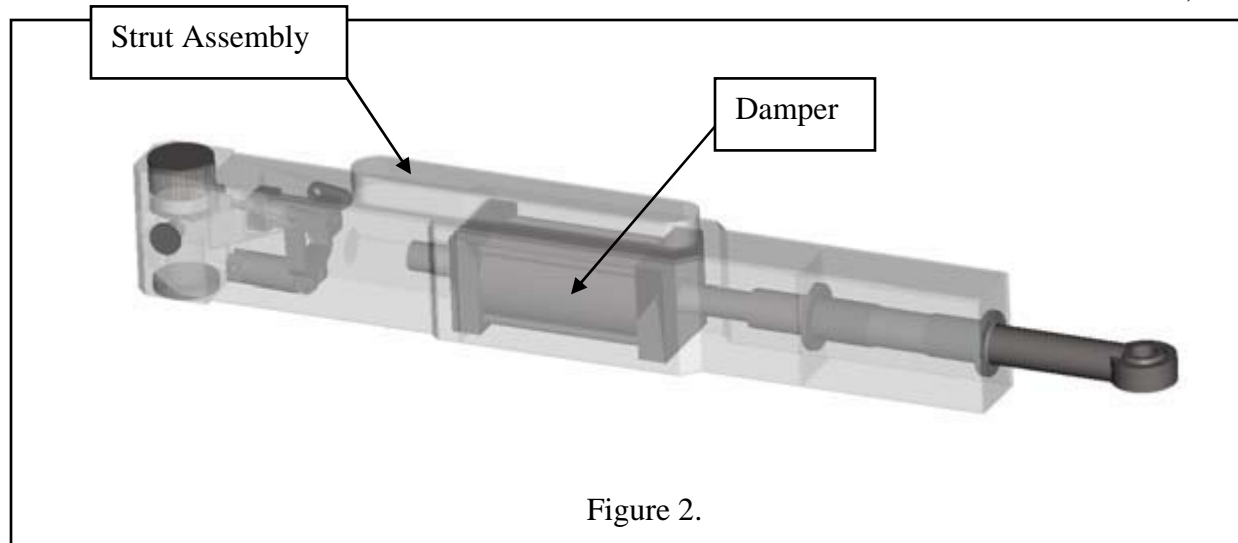


Figure 1.



The damper shall have provisions for remotely altering the damping characteristics between damped, un-damped, and locked (rigid). If this RFI leads to the issuance of an RFP, multiple damper units will be requested with a period of performance of 9 months after Notice to Proceed. The Dampers will be used after delivery to NASA as a test articles and/or operational ground based equipment. One part of this RFI is requesting cost and schedule information to design and build multiple, Damper units. Another part of this RFI is requesting cost and schedule information to design and build a single test article. The test article will be used to prove the concept and make any corrections before obtaining the operational units.

It is envisioned that this potential acquisition may ultimately result in the award of a competitive awarded best value contract.

The intent of this Request for Information (RFI) is to obtain information from industry to assist Kennedy Space Center (KSC) in its acquisition development. NASA reserves the right to share all information received in response to this RFI throughout NASA and to use all information submitted in response to this RFI in NASA's formulation of a solicitation seeking competitive proposals. However, any competition sensitive data should be clearly marked and will not be shared outside of the immediate NASA development team. Although information contained herein represents current program content and acquisition planning, it is subject to change. Response to this RFI is requested within the context of the general approach described in the following paragraphs.

### **LINEAR MOTION DAMPER DESIGN AND BUILD**

Test Article Damper - with the following characteristics:

- Damper to control linear motion in both tension and compression
- Minimum damping constant (preliminary estimate): 300 lb-sec/in
- The oscillation frequency will be approximately 1.0 Hz.

- Stroke: 5"-12" (estimated)
- Maximum axial load: 126,000 lbf (estimated)
- Damper shall have remotely activated valving (or equivalent) which produces three distinct damping characteristics, non-damped, damped, and locked (rigid).
  1. In the un-damped mode, the strut should provide minimal resistance to applied forces.
  2. In the damped mode, the strut should provide specific damping characteristics (300 lb-sec/in) to vehicle motion.
  3. In the locked mode the Strut should be essentially rigid, allowing minimal movement of the vehicle.

### **SPECIFIC INFORMATION SOLICITED**

Responders to this RFI are encouraged to comment on any of the foregoing and to express their interest in this proposed acquisition of a Fluid Viscous Damper by submitting the following information:

1. Organization name, address, principal activity of organization, primary point of contact and business size.
2. Cost – Rough Order of Magnitude (ROM) for design, fabrication, testing, and delivery to KSC of Viscous Damper test article. Also provide separate ROM for design, fabrication, testing, and delivery to KSC of multiple Viscous Dampers to be used in launch platform operations.
3. Design and Fabrication Schedule – Describe the time needed to design, build, perform testing and deliver Damper(s) to KSC. Schedule shall show the earliest date that fabrication may be completed for the first Damper. Note; Time should be allotted in the design phase for a minimum of two NASA reviews. NASA shall have final approval of all designs, analysis and fabrication.
4. Experience – Describe your experience in designing and fabricating Fluid Viscous Dampers and/or similar equipment. Please state "past performance" and verifiable references to past projects.

Note: If responders to this RFI would like to propose alternates to such things as; Damper concept, materials of construction, newer technology, etc. they may do so along with accompanying cost and schedule; however, the cost and schedule for the Damper as outlined above shall also be provided with the RFI response.

**RESPONSE INSTRUCTIONS**

The requested responses are for information and planning purposes only. NASA does not intend to post information or questions received to any website or public access location. NASA does not plan to respond to the individual responses. Feedback to this RFI may be utilized in formulating the Government's acquisition strategy and documents.

All responses should be provided in MS Word document format, both hard and electronic media. Font should be Times New Roman, size 12. Responses should reference "RFI-KSC-HEX". Please submit responses no later than **February 3, 2009**, to NASA/KSC Procurement Office, ATTN: OP-ES/, Erik C. Whitehill, Contracting Officer, Kennedy Space Flight Center, FL 32899, or by e-mail at Erik.C.Whitehill@nasa.gov.

This preliminary information is being made available for planning purposes only, subject to FAR Clause 52.215-3, entitled "Solicitation for Information and Planning Purposes". It does not constitute a Request for Proposal, Invitation for Bid, or Request for Quotation, and it is not to be construed as a commitment by the Government to enter into a contract. Moreover, the Government will not pay for the information submitted in response to this RFI, nor will the Government reimburse an Offeror for costs incurred to prepare responses to this RFI.

No solicitation exists at this time; therefore, do not request a copy of the solicitation. If a solicitation is released it will be synopsisized in the FedBizOpps and on the NASA Acquisition Internet Services (NAIS). Firms that respond to this RFI will be placed on any future mailing list for this acquisition. However, it is the potential offeror's responsibility to monitor these sites for the release of any solicitation or synopsis.

**POINT OF CONTACT**

Technical Lead: Gregory Chandler