

**Subject:** Re: L0900066-v: Small quantity of small commercial Viton O-Rings  
**From:** John Worden <worden\_j@ligo-wa.caltech.edu>  
**Date:** Thu, 16 Apr 2009 08:15:55 -0700  
**To:** Dennis Coyne <coyne@ligo.caltech.edu>  
**CC:** Daniel Eugene Clark <Daniel.Clark@stanford.edu>, Robert Taylor <rtaylor@ligo.caltech.edu>, Brian Lantz <blantz@stanford.edu>

Dennis;

Yes, waiver granted, next time this group should obtain material certs.

John

Dennis Coyne wrote:

LIGO-L0900066-v1

John,  
 Will you grant a waiver?

Hello Daniel,  
 Bob Taylor told me about your small quantity of small (~1/4" dia) viton o-rings. I see that you ordered them from McMaster-Carr and did not send along material certification. The LIGO Vacuum Review Board (VRB, see [the VRB log on the AdL wiki](#), or [L070086-00](#)) has indicated that commercial viton o-rings should be supplied with material certification and be obtained from Dupont, 3M, Parker and Parco. Often McMaster-Carr will or can provide material certification if asked (although I don't know if this can be done after the order has been shipped). Since this is a very small quantity (25, ~1/4 dia. o-rings), I propose to ask John Worden (the VRB chairman) for a waiver assuming that the RGA passes.

Dennis

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**Subject:**

Re: Viton O-Rings

**From:**

Daniel Eugene Clark <[Daniel.Clark@stanford.edu](mailto:Daniel.Clark@stanford.edu)>

**Date:**

Tue, 14 Apr 2009 07:48:00 -0700

**To:** Robert Taylor <[rtaylor@ligo.caltech.edu](mailto:rtaylor@ligo.caltech.edu)>

**To:** Robert Taylor <[rtaylor@ligo.caltech.edu](mailto:rtaylor@ligo.caltech.edu)>

OK, all 50 are coming. If you need more than that I can talk to Brian Lantz and see about getting you even more if necessary.

Once again, thank you,  
 Daniel

On Tue, Apr 14, 2009 at 7:14 AM, Robert Taylor <[rtaylor@ligo.caltech.edu](mailto:rtaylor@ligo.caltech.edu)> wrote:

Hi Daniel,

It would be better if you sent as many as you have.

25 would be too small a load for, even the smallest oven I have.

The larger the oven load, the better.

Cheers

Bob

Daniel Eugene Clark wrote:

Hello Sir,

Thanks for taking the time on the phone today. We are working on some tuned mass dampers for the blade springs on HAM 6 at LLO and the viton o-rings were one thing they said should be cleaned at CalTech.

I have ordered 50 of them and had them sent directly to you from McMaster. These should have a width of 1/16inch. with about a 0.1in hole and a little smaller than 0.25in diameter.

We really only need 25 clean ones so if it is easier to only clean 25 that would be fine. Once they are clean please let me know by e-mail and ship them to LLO with Attn: Daniel Clark

Thank you so much - and if there is anything I can help with please let me know.

Daniel

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