

Re: Shuttle lift-off questions

Source: <http://sci.tech-archive.net/Archive/sci.physics/2006-07/msg00750.html>

- *From:* mmeron@xxxxxxxxxxxxxxxxxxxx
 - *Date:* Fri, 07 Jul 2006 16:42:43 GMT
-

In article <e8lb1h\$8qk_001@xx>, jmfbahciv@xxxxxxx writes:

In article <rdbrg.26\$45.1126@xxxxxxxxxxxxxxxxxxxxxxxx>, mmeron@xxxxxxxxxxxxxxxxxxxx wrote:

In article <e8iqo1\$8qk_002@xx>,

jmfbahciv@xxxxxxx writes:

In article <zbSsq.9\$45.821@xxxxxxxxxxxxxxxxxxxxxxxx>, mmeron@xxxxxxxxxxxxxxxxxxxx wrote:

In article <e8g9gt\$8qk_001@xx>,

jmfbahciv@xxxxxxx writes:

In article <1152104183.822500.125410@xx>, "Randy Poe" <poespam-trap@xxxxxxx> wrote:

jmfbahciv@xxxxxxx wrote:

Question
2:
One
of
the
reporters,
who
was
talking
about
the
reason

Re: Shuttle lift-off questions

for
one
of
the
delays
(cracks
in
the
insulation)
said
that
the
fuel
tank
expands
when
emptied
and
contracts
when
filled.
This
is
counterintuitive
to
me.
If
the
reporter
is
correct,
why
does
this
happen?
I'm
assuming
that
filling
the
tank
decreases
inside
pressure?

I can't find a
definitive
answer as to
whether it
expands or

Re: Shuttle lift-off questions

contracts
when
fueled. I
found some
stuff that
talks about
it
"expanding
and
contracting"
during
fueling,
other stuff
that says it
expands
when filled,
and other
stuff that
mentions
cryogenic
fuel (liquid
hydrogen
and oxygen)
that is
replaced
with warm
air as it
empties.

This means that the bleed
valve has to be opened? I've
never
thought about how those
things are filled and emptied
in
terms of the plumbing. I
know enough that I wouldn't
want
to do that work (I'm a wimp)
:-) Or am I wrong about the
plumbing, too?

Possibly it
is that
change of
temperature
that
accounts

Re: Shuttle lift-off questions

for what the
reporter was
saying.

When I freeze something it
expands; but this is solids.

Other than very few exceptions, stuff
contracts, *not* expands, on
cooling.

Yup,yup. That's my bug. I'm a stup but I did achieve
honestly;
I can't recall playing with anything but water.

Yes, thought so.

You are very good at spotting the single-point failure.

That's a significant part of my job.

Food is water.

That is true. So, you didn't realize that the common stuff you play
with is exceptional.

Exactly. I'm still have trouble acclimating to this one :-).

I wonder what kinds of very, very basic assumptions we have
because our common element is an exception? I'm not sure
I can even detect a single hidden assumption.

That frozen stuff floats on top of liquid stuff, for once.

It sure would make a good scifi subject.

Yes, for sure.

Re: Shuttle lift-off questions

Re: Shuttle lift-off questions

Does this have anything to do with Ken's comment about biology is all about surfaces? I'm still thinking about that one.

This one is more complex. But, in a nut shell, biology is about structures in liquid. and stuff is happening on the surfaces of the structures. But it could've been a different liquid than water.

Mati Meron | "When you argue with a fool,
meron@xxxxxxxxxxxxxxxxxx | chances are he is doing just the same"

.