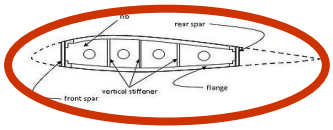
The Spare Rib News



KAPITI AEROMODELLERS' CLUB

The monthly newsletter of the Kapiti Aeromodellers Club

July 2025

www.kapitiaeromodellersclub.org.nz

Kapiti Aeromodellers Club group

Notes from the Prezidential Scribe

Well, I can't say I've been enjoying the weather of late. Getting flying days these past few weeks have been few and far between. I guess winter had to arrive at some point.
The committee had its second meeting a week or so back. I'm pleased to report that things are coming along quite nicely and there is plenty of enthusiasm.

I would still love to have more newsletter content, and I appreciate those of you who have ideas on content to contribute. You don't necessarily have to write an article, but if you can give me the topic and area of interest, I'm sure I can come up with something.
During this past week Andrew and I met with the park rangers as part of our efforts to keep them/us abreast of each other's activities. It was well worthwhile and the first time we have had a proper sit down since John took over his role as Head Ranger.
They are now producing a seasonal newsletter, to which we were asked to contribute, and that was sent out this past week. I forwarded to all members. If you're interested, fine, if not, then just delete. I'm not going to create a separate email list.
Last month I had to hurriedly send out a supplement as I forgot to include Steve Wilson's plug for his new website at Firebrand. So hopefully you all read, paid attention, scanned the new site and bought lots!

Bikes in the pits.
It was noted when we had the scouts visit, that we had a lot of visitors arriving by push bike. With the area being quite crowded, we found the bikes a bit of a challenge and perhaps a safety issue. We will be mounting a sign at the beginning of the pits area asking cyclists not to ride past that point.

Reconfiguration of strip area.
With the work having been done to the South end, the committee had a pretty full discussion as to how we want to configure the pits area and pilots box going forward. Initial thoughts over time was to simply move everything southwards. Thus, maintain similar gaps between everything. However, a couple of incidences lately which could have led to harm and did lead to damage, raise the question of the safest configuration and what that might look like. Many of you will have flown at other clubs and will note how separated the pilot box area is from starting areas and pits areas. We are restricted with our space, but we need to create the safest configuration we can. If you've been to warbirds, you will know the separation from pits area to starting area to pilots' box. If you fly at New Plymouth, there is a separated starting area from the pits and the pilot's box is some metres away from the starting area. You are not allowed in the pilot's box unless flying, observing or teaching. No casual conversations. At Colyton, Fielding, there is a fenced off starting area behind the pilot's box to which there is only one entrance and that from the side when ready to enter the strip. Where I flew in Auckland at Highbrook, cars were outside a fence, starting was not in the direct pits area and there was some 20 metres out to the pilot's box.
I don't know of any functioning strip that I've been to where models can be started up in the pits next to your car as we can.

So, we are giving this some serious thought. We need safety, we need no distraction in the pilot's box, so starting next to the pilot's box isn't a thing. Everything is on the table. Separate starting areas, access to the strip away from vehicles. Etc etc.
Remember, one accident will be one too many.
When we have some viable options in mind, well have a meeting to discuss it all.
In the meantime, feel free to ask any committee member their thoughts or communicate yours.

See you at the strip sometime.

Steve Hutchison.

May Club night

This was Neil Schrader's time to shine.
Neil brought along his Mosquito which he has been building on and off over the last 20 years.
His display of photos was awesome and the detail such a modeler goes to was inspiring and off putting at the same time.
The model is built from the Brian Taylor plan but with Neil's obvious input. He's ended up with a moulded fibreglass fuse, wooden wings an incredibly designed and engineered retract system which is based on the original. Neil was lucky enough to visit one of the rebuilds being undertaken at Avspecs in Auckland to grab lots of photos. We are a little unfortunate in NZ as having lots of museums which such planes in them don't exist as they do in places like the U.K.
Neil has a build blog going on this at RC scale builder.
Here is the link to go have a look.
https://www.rcscalebuilder.com/forum/forum_posts.asp?TID=32808&PN=1
It's truly inspiring.

Working undercarriage retract test bed. Neil made all the components including the treaded scale tyre. All in the days before 3D printing. The system is operated by a screw jack.

The model as at club night. twin Laser 150 4 strokes for power.

Various photos from the build blog. Go and have a look. It's well worthwhile

Flight Line Etiquette at Kapiti Aero Modellers Club

At our recent committee meeting, the subject of flight line etiquette was raised. This wasn't the result of any one failure observed, but just a number of observations over time.
Flight line etiquette makes or breaks the flying experience and contributes towards safety.
Brent Douglas offered to write this up. Below is the document thus far. If you have comments or suggestions for additions or deletions, then please let us know.
All of what Brent has written here, isn't new. It's what we should be doing anyway.
Steve Hutchison

1. **Pre-Flight Preparation.**
   Set Up Behind the Flight Line
   Always assemble and prepare your aircraft well behind the flight line or in the designated pits area.
   Keep clear of the active flying zones to avoid distractions and hazards.
   Range Check and Pre-Flight Inspections.
   Before your first flight of the day, carry out a thorough pre-flight check including a range test, control surface movements, battery condition, and failsafe settings. A five-minute check avoids mid-air failures.
   Avoid distracting pilots during setup.
   Setting up a model requires focus. Please don't interrupt or engage pilots while they're preparing or troubleshooting a model. Wait until they're finished or step away before starting a conversation.
   Even a friendly chat can lead to a missed safety check.

2. **Communicate Clearly.**
   Call out your Intentions
   Use clear and audible calls when you:
   - Take off ("Taking off!")
   - Land ("Landing!")
   - Perform a low pass ("Low pass left to right!")
   - Walk onto or across the runway ("On the strip!" / "Crossing!")

   Communication avoids surprises and gives fellow pilots time to respond.
   Acknowledge other pilots
   If another pilot calls a landing or emergency, acknowledge them. Mutual awareness helps avoid airspace conflicts.
3. Use the Pilots box
   Stick to designated pilot boxes
   Only fly from the marked pilot stations. This helps maintain spacing and keeps everyone within visual and vocal contact. Avoid wandering along the strip while flying.
   Respect the Flight Line
   Never stand on the runway or too close to the active flight path. If retrieval is needed, call out clearly and wait for confirmation before stepping out.
4. **Respect the Airspace**
   Follow the Circuit
   If a fixed flying circuit (e.g., left-hand or right-hand pattern) is in place for the day, stick to it. This prevents mid-air conflicts and maintains a smooth flow for all.
   Avoid overflying the pits and spectator areas (these are out of bounds).
   It's critical to keep aircraft well away from the pits, carpark, and public areas. Always keep models in front of the flight line and fly within designated boundaries.
5. **Share the Sky**
   Limit the number of aircraft in the air – (as per club rules)
   When the field is busy, be considerate about the number of aircraft flying at once-especially with mixed types (e.g., helicopters and planes). Speak with other pilots and take turns when needed.

   Hovering and 3D Flights
   If you're hovering or performing aggressive 3D manoeuvres, keep to one end of the flight line or use a designated area, as agreed with others flying.

6. **Be Supportive and Aware**

Help New Pilots

We're a club built on camaraderie and learning. Offer support to new pilots, give them space when flying, and help ensure they follow safe practices.

Look out for each other

Accidents can happen, but many are avoidable with awareness and care. If you see unsafe behaviour, politely raise it or refer to a committee member.

7. **Post-Flight Awareness**

Clear the runway quickly

After landing, taxi your aircraft off the runway promptly and retrieve it without delay to avoid blocking others.

Debrief behind the Line

Chat, troubleshoot, and admire each other's aircraft away from the flight line so others can continue flying uninterrupted.

Final Word

Good flight line etiquette isn't just about rules - it's about respect. Respect for safety and for fellow pilots and for the shared enjoyment of our great hobby.

Brent Douglas
Club Captain

Clubnights coming up

Weve had a bit of a change around in club nights coming up.

July club night

The July club night will now be a presentation from John Pfahlert on the reasons and building of the Pfahlert Special which maidend recently.

August club night

For August we'll be showing another video from the Classic Cockpits series. In the past we've seen the one on the PBY Cataline and the Vampire.
This one is 'Flying the Avro Lancaster'.

September Club Night

Stew Cox is going to talk to us about weather forecasting, getting better information, how to interpret it etc.

October Club Night

At this stage we will be talking about model inspections and possibly also large model inspections. Details are still being put together.

November

Strip re-configuration

It's possible that October/November nights will swap.

Mixing of glo fuel

I've been asked by a newer member to write something on the subject of mixing your own glo fuel.
Rather than just write the recipe that most use, I've added a few things. These are based on what I have read and experimented with over the years.

The basic fuel mix is simple. Made up of Methanol, oil and Nitro.
The brew that most use is:-
18% oil.
5% nitro

Balance – Methanol

So, if mixing 1 litre that equals.
180 ml oil
50 ml nitro
770 ml methanol.

The oil ratio is based on the engine manufacturers recommendation. You will find OS mostly recommends 18%, but this can vary. Four strokes don't need as much and often mixed around 10-12%. I used to run separate mixes for 2 stroke and 4stroke as did others, but these days can't be bothered. I know some who run everything at around 16% oil.

Whilst 5% nitro is pretty standard, nitro does a couple of things with our glo motors. It smooths the idle and it adds power. So, you will find some pre-mixed fuels, especially for helicopters and race cars, run 15% or more. One of my friends in Auckland. Found running 7% was better in 4 strokes, so started mixing all his fuels at 7%.

Nitro is nitro. There is no difference really between brands.
Oil, on the other hand, varies markedly. The majority of our members who run glo motors, run Klotz Supertechniplate. This oil is 80% synthetic and 20% castor. Back in the old days, castor was the only oil used.
There is much discussion about using an oil with a castor base vs a fully synthetic oil. You will find that most people that buy pre-mixed fuels such as Coolpower, buy by default fuel with a fully synthetic oil. As much research as you do, you will fail to find a definitive answer to this. Most of our members who mix their own, use Klotz. In recent times I've tended to run Klotz fully synthetic. I have a supply of Coolpower fully synthetic that I know some members swear by. When I bought Jim Hamil's remaining fuel supplies from him, he swore that the fully synthetic Coolpower oil was much easier on paint than the Klotz Supertechniplate.
There was a guy who wrote for RCM&E magazine on fuels and engines. He was a world expert and wrote for them for many years. Right up until his time of passing in his early 80s. he swore that we were hung up on oils containing Castor and we all should be running straight synthetic.
It is therefore a personal choice.

Where to buy your ingredients.
Methanol. The price of Methanol has skyrocketed in recent times. In the Wellington area, members have been buying from Solven Supplies. You need to ring their local rep whose number can be found on their website and have a chat. There has been some change in ownership in recent times and arrangements of changed.
You will buy 20l.
Oil. You can buy your oil from a number of model shops such as Hangar One or, if buying Klotz, direct from the importer in New Plymouth. USA SPECIALITY PRODUCTS. This is where most of our members purchase from. However, you do need to check pricing as at times better prices can be found elsewhere.
Nitro. Nitro can be purchased also from USA Specialty Products as well as some model shops. The price for Nitro has gone through the roof in recent times. You need a litre of nitro for 20l of methanol at 5% mix. USA specialty products do/or used to/ sell in 1l bottles as week as 4l.

Mixing. The secret to mixing is clean containers and accurate measurements.
I tend to measure oil first into a measuring jug, then add to the same jug, the nitro.
This then goes into my container.
I then measure the amount of methanol required. The first litre of methanol will rinse the jug.

Hope this helps.

Happy mixing.

Steve Hutchison

BIG MODEL Rally

As many of you would know, there has been an organisation within modelling devoted to larger aircraft. This was originally known as MANZ and more recently, as LMANZ. The organisation was separate to MFNZ, but from a pilots' perspective came under that umbrella. The aim was to hold rallies at clubs, devoted to larger models. These were models of 2m wingspan or more or biplanes of 1.5m or more. We held such a rally in early 2016. LMANZ as an entity has been wound up. A SIG has been formed within MFNZ called 'Big Models' and is aimed at holding rallies for these larger aircraft.
We have been approached by the SIG to see if we would be willing to hold such a rally next year. Probably after our own rally has happened. As a committee we have discussed this. We are not against doing this and are seeking further information.
Further info in due course.

Steve

Trip to Peter Randerson for Laser cutting demonstration

When we know a date, when John P is back, we will let you know.

Steve

3D Printed Repair

By Pierre Daigneault
I bought my Hangar 9 Funtana from a guy up in Levin some time ago and I have to admit that I did not do the "due diligence", and check it out much, before taking it home. When I got it home, I found a number of issues.

- The Ignition module had been "cooked" (8S NiMh pack – nom. 9.6V, on 8.4V ignition module)
- Both wing tips stoved in (look like it had been "cartwheeled")
- Interior of the fuselage had been burnt out (possibly from ignition module catching fire)
- Throttle servo epoxied into place
- Battery pack epoxied into place
- Engine mounts secured with self-tapping wood screws onto the fire wall.

There were too many issues to list them all, but to cut a long story short(er), I fixed things up and finally got the thing flying. Then, the unimaginable happened. I was just preparing for a landing approach at the North end of the strip, and everything went dead – motor, radio…everything…
I was left to watch helplessly, as the model made a less than graceful return to terra firma.

The model impacted the hard ground right next to the walking track. I guess the damage could have been worse. The fuselage, from the back of the cockpit forward, was virtually all "toast", including the cowl, and the turtle deck.
The "tail feathers" and left wing were relatively unscathed, and the right wing was cracked up, with the aileron destroyed. The wing joiner was badly bent.
The model had a 2S2P battery pack, wired up using servo extension leads. The accident investigation revealed that, solder had "wicked" up the battery lead, rendering it virtually solid. Then the lead fatigued and broke (the battery pack was mounted on the engine box and was likely subjected to severe vibration).

Well, there you have it. A bag full of bits, and the age-old question…repair or bin?

I was not too keen on the repair. Because this model was only produced as an ARF, there are no plans available, anywhere, and then you have the difficulty of finding good building supplies these days (good balsa and ply). The wreckage sat in the corner of my garage for quite a while before I decided that I would give the repair a try. My kids had bought me a 3D printer (FDM) some time ago, so I thought that I would treat this as a bit of an experiment/challenge and attempt to 3D print the repair. With next to no experience in 3D printing or CAD, and having no plans to work off, it was indeed going to be challenge (for me anyway).

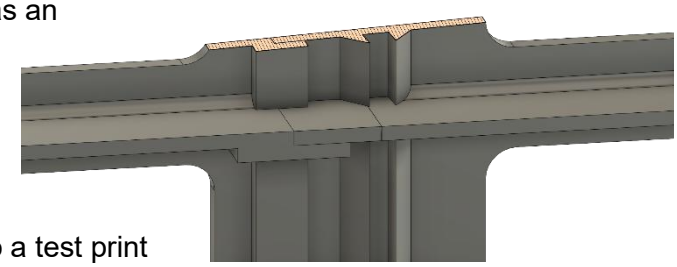
My first step was to download and install Fusion 360 personal version (my previous 3D work was all done using Sketchup or Freecad), and to start trying to climb the steep learning curve. This went without hitch, although the learning part is never ending. My intended workflow was to design the sides, then the formers, then the engine box. I would attempt to repair the existing turtle deck and cowl.

Next, I had to decide what material to use. I was favouring using PETG, but I was concerned about adhesion, knowing that many things do not stick well to PETG. My concern with PLA was its brittle nature and ability to sustain the vibration that would be likely with a “gasser”. I settled on PLA+. I have done some work with PLA+, and have been impressed with its strength and flexibility.

Now to trying to design the fuselage…

I could estimate the length of the fuselage by measuring from the back of the canopy to the front of the turtle deck (the turtle deck was wrecked but could be laid out straight and measured). I could measure the width of the fuselage at the tail, and at the back of the cockpit, and then extrapolate for the length of the fuselage, as measured above. To my delight, the calculated width of the firewall came out identical to the width of the firewall from the wreckage. This meant that the fuselage had been designed as one large “wedge”…this would greatly simplify things.

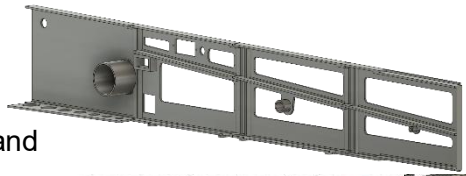
The forward part of the fuselage that needed to be replaced, was about 600mm long, but my printer would print a maximum width of 240mm, so this was going to have to be made in parts and glued together. I was concerned about the strength of the joins and so engineered each join with a “shiplap” type overlap, as well as an overlap of the longitudinal supports. I also added “gussets” to locate and hold firmly the fuselage formers.



The picture to the right shows the joint of side #1 to side #2 and the “filleted” cavity for the fuselage former to key into.

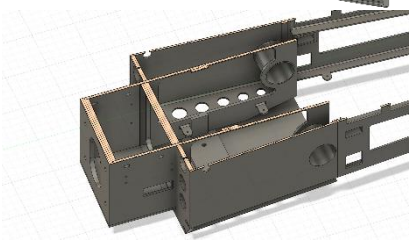
With this completed I was able to design and do a test print of the four panels required to make one complete fuselage side. I wanted to do the test print to determine if the method of joining would be strong enough, and to confirm the location of the wing joiner and the wing locating dowels.

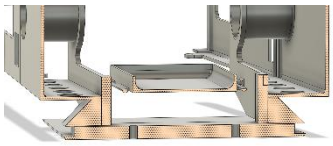
The test print fitted together very well. The bond using straight CA was unbelievably strong. The location of the wing joiner and dowels was out by about 2mm, and so a small adjustment to the design and I was ready for the final print of the sides.



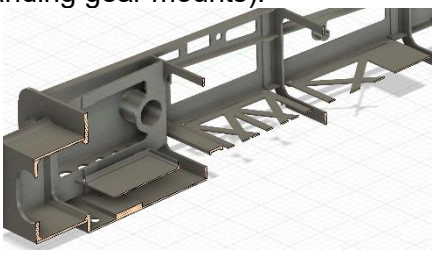
I had already designed into the sides, cavities for; wing joiner, wing locating dowels, power panel/switch (LED ignition indicator), wing restraint system, aileron connection, and fuel dot.

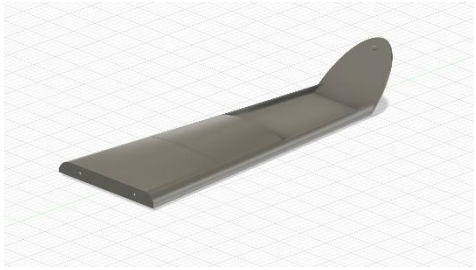
The engine box was an area of concern for me. This area would be subjected to a high level of vibration and other forces and would need to be significantly reinforced. This was designed with generous filets on all joins and with reinforcement formers extending from the tank bay.





I was also concerned about the mount for the landing gear. Frequently this is subjected to quite high and sudden forces. To ensure that this would have enough strength for my, less than perfect, landings, I printed the landing gear mount with high infill ratios and added reinforcing “wedges” on both sides.
In all areas where I had mounting nuts, I added a piece of 6mm ply for the blind nuts/”T” nuts to bed into (engine mounts and landing gear mounts).
Lastly, I added supports and trays for all the radio gear, tank etc. The trays are mounted on “lugs” extruded from the fuse sides, using 2mm countersunk screws (and so can be removed), and, although only 1mm thick, they add considerable torsional rigidity to the frame.





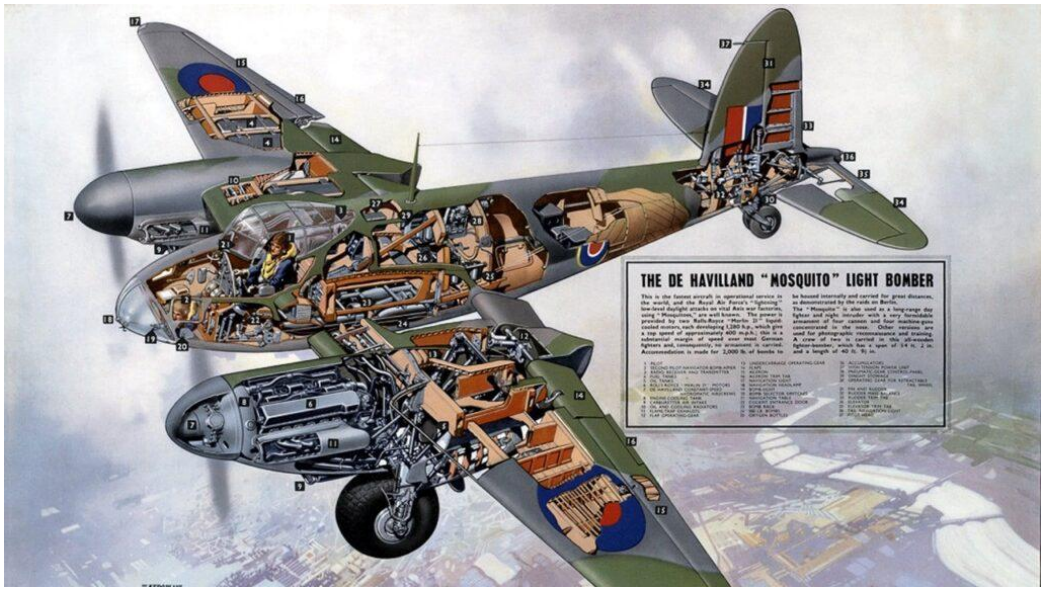
My next challenge was the turtle deck. Although I had originally planned to repair the old one, when I had a closer look…it was “toast”. Since I had already designed the part of the fuse that would support the deck, the design was not difficult, however, because of the size and the limitations of my print bed size, I had to print this in four parts (three horizontal components and the backplate, with the canopy latch). Again, they were “keyed” with overlapping joints and joined with CA. The final part came out well, however covering film does not stick well to PLA and tends to wrinkle a lot, so I just left it uncovered. It did come out a lot heavier than the original balsa/foam part.
I was also intending to repair and re-use the canopy and engine cowl…and again, the job was just too big, and way beyond my capability. Designing the engine cowl, proved to be quite a job. Eventually, I used a few “lofted” shapes and got something that was acceptable to me. Designing it was difficult but printing it would also be a challenge. I think that the part must have used twice as much filament for the supports as it did for the part… and it took three tries before I got the correct amount of “Z-hop” to prevent the supports from prematurely breaking off.

My final challenge was the canopy.
I was not able to emulate the old shape very well but was able to get something that mated in with the rest of the turtle deck and fuse very well and gluing it on with E6000 was “rock solid”.
I tried to print the canopy using transparent/translucent filament, but despite using all the “tricks” that I found online, to improve the clarity, it is still not very clear. In the right light you can make out some of the features of the pilot (I kept the same girl pilot) but it is not great. Also had to be printed in two parts.
And here is the finished “beast” alongside my Katana funfly.
It has been a steep learning curve, and the learning is ongoing. I am still very wary of 3D printed parts, especially on a “gasser” with high levels of vibration, and so I am constantly pulling off the cowl and checking for any looseness or failures. Currently I have had a few mounts break (servo mount on the engine box), but the rest of the airframe has been extremely robust even though I have had a good number of flights with less than perfect landings. The performance of the plane has been good, although there is a noticeable reduction in the vertical performance associated with the increase in weight. . I didn’t do the “before and after” weight so I cannot say by how much. I have yet to investigate how much I could reduce the weight without having to go the PLA-LW.

Mini F4U Corsair - recent acquisition
Gordon McArthur

A few details on this plane. I picked it up during a club night at Kapiti. Along with a bunch or others it was un-flown and came with a Mode2 Tx, battery, usb charger and wheels. Battery is a 1S 220mAh. (payment was donation to the club $50 seemed fair) They are currently on special at Aliexpress NZ$117.77 plus GST)
I searched Aliexpress for similar models and matched the pictures. Same size, colour scheme and the number 3 on the fuselage. Volantex model made by another company. A brief search and the AI summary showed it should bind to my Radiomaster Tx16 Tx with the built in multi module.*(using v761 protocol 3 or 4 channel options the model bound up immediately, with surfaces and gyro working - all directions correct. Another short search and I found a page showing the gyro could be turned on or off on channel 5.
Master list of protocols on github https://github.com/pascallanger/DIY-Multiprotocol-TX-Module/blob/master/Protocols_Details.md
Scroll down to V761 for all the details required to set your radio up.

Test Flights - I charged the battery and headed to Trentham. Model launched really well (with Gyro on) until part way through a turn and it spiralled into the grass. After a couple more tries, I attempted a glide test with gyro off - it pitched up and spiralled in. I think it needs a little more weight in the nose as it appears to have a rearward CG. The other possibility is the battery voltage is dropping under power - I have yet to try adding some nose weight
and repeating the glide test.(maybe later today)



Kapiti Aeromodellers' Club Committee 2025/2026 year.

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…and that's it from me. As Don would say. Fly hard, land soft.
Steve