

P.O. Box 155 Zimmerman, MN 55398

## "Rising Above for Education" "Making Dreams Become A Reality"

December 2024



# **TSUNAMI UPDATE**

Over this last year there has been a few changes to Tsunami from what many of you saw at the Reno Air Races.

Our group apologizes if we have not shared information. The

**Dreams** Become A Reality!

**Making** 

group lead by John Bjornstad meets almost every Saturday from 9—2. During the week there is a lot of brainstorming on the project.

One of the greatest challenges on the project is having to reverse engineer almost every area of the aircraft. Then there is building the tooling. Yes, we did receive the jigs in from the John R. Sandberg estate, but there are many areas that need special tooling and jigs. A lot of these were reused during the original build to save on cost.

Inside this issue

Tsunami . .....

Kruse Aviation, In.

Engineering the scoop area has been extremely challenging. From

# This is What Was RECEIVED!





### **TSUNAMI Continues.....**

1986 to 1991 this area was damaged and reworked over 5 times.

Reno Air Races 1987 landing gear collapsed
Wendover (speed record attempt) 1989 landing gear collapsed
August 1990 Anoka County Airport landing gear collapsed
September Scoop disengages from aircraft during test flight in St.
Cloud, MN

September 25, 1991 at Pierre, SD final accident—scoop severely damaged during accident.

The original design for this area was to have 1 radiator and 1 oil cooler. Due to engine temperatures there was a second radiator and oil cooler added which increased the size of the exist door on the scoop. There was another oil cooler heat exchanger located in another area of Tsunami. So, if your are trying to back engineer this area what would you do?

John has reached out to many people on first finding out the why and then recommendations on what the direction should be used to rebuild this area. Since the aircraft was built; Lockheed Engineer Pete Law has engineered a radiator oil cooler to cover the whole front of the scoop area. This will be a custom cooler made out of aluminum. It is estimated that this will decrease the weight about 50 lbs.







Princeton, MN 2024

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#### **TSUNAMI CONTINUED**

After Reno Air Races 2023 the side skins on the tail section was finished riveting. Many saw it sort of put together, now it is all one piece with many rivets!

Permanently attaching the tail to the fuselage has happened as you can see in the photos.





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**Current Photos 11/2024** 





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Currently the group is building the tooling for the scoop section. So hopefully in a few months we will see additional parts added to the fuselage.

Plans are under way to attend the Roswell Air Races in September of 2025. The goal would be to trailer the aircraft down for display. Flight Expo did receive a huge donation this year. Robin Crandall in February of 2024 sold his well known Hawker Sea Fury "Sawbones" to Paul Bennet located in Australia. Robin made the decision late summer to donate the Sawbones trailer to Flight Expo for both Tsunami and Flight Expo's education programs.



Yes, this means we need funding to get the trailer inspected and have a new wrap installed. We also will need a dedicated driver/rig that would help get the trailer safely to Roswell and back!

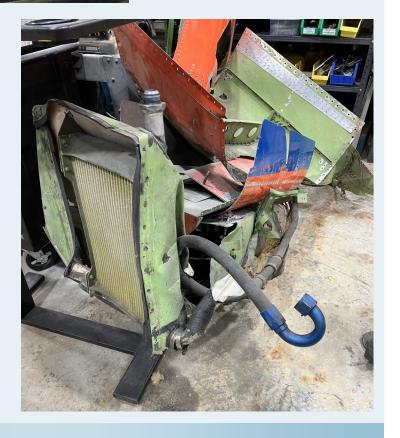
SOOOOOOO; things may appear to be quiet; but there has been a lot of progress with the Tsunami program.

Below and on the next page is several old photos of the aircraft during the first build, rebuild after an incident.

This is the current status of the radiator when received from the estate



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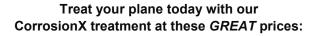
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