



AMA Charter #341



#### ATTENTION

I'm sure everyone has heard but in case you didn't, someone in the club had their garage burn down due to a lipo battery/ Transmitter battery catch fire. Please do your due diligence and make sure you charge your batteries outside, or at the very minimum in a charge safe container. Always inspect your batteries for defects, puffiness, rips/tears, if your battery has any of these get rid of them as a slight puncture and that battery is going up in flames. Please stay safe and be smart! For safe care and other safety tips on lipos visit this site.

https://www.uvm.edu/sites/default/files/UVM-Risk-Management-and-Safety/lipo\_battery\_safety.pdf



HCRC Meeting Notes from Thursday, September 1st, 2022

Quorum Present - 15 Members including 4 Executive Members present: Mike Shaw, Dan Kapinos, Ron Paul, Bill Ewers, Bob Prosciak, David Whitely, Rick Nadeau, James Germana, Wayne Dawson, Jack Dawson, Gene Paulson, Eric Wroblewski, Jose Villanueva, Mike Booth and Chris George.

There were two member applicants present: Michael Dashniaw and Robert Tiffany

Club finances for the month of August were reported and approved.

Wings over Hadley was August 20th & 21st. Weather was good both days. 20 pilots registered and flew in the event. There were a significant number of spectators too. Leo Dube did the music and announcements. Ron Paul ran the event as the CD and was the chef at the same time! We are looking for a CD for next year. Next year may be a 1 day event.

Upcoming events:

- 1. The club barbeque is Saturday, September 10th with a rain date of Sunday, September 11th. Ron will be making pulled pork and baked beans. This event is free for club members and their families. Please bring a canned food item as a charity donation.
- 2. The tailgate swap meet is Saturday September 24th from 9 AM to 1 PM with a rain date of Sunday, September 25th. Sellers pay \$10 and buyers are free. Please bring planes to fly after you are done buying and selling. We are looking for volunteers to help with this event. Please bring a canned food item as a charity donation.
- 3. The Electric Festival is Sunday, October 9thfrom 9 AM to 3 PM with a \$15 landing fee. We are looking for volunteers to help run this event. Please bring a canned food item as a charity donation.
- 4. The field clean up is Saturday, October 22nd from 10 AM to 12 Noon. We will be flying afterwards. The rain date is Saturday, October 29th. Please bring a canned food item as a charity donation.

The next meeting is at the VFW in Florence at the normal day and time.

Ron is retiring from his position as Treasurer. Thank you to Ron for 9 years of service as the club treasurer. Gus Coelho was nominated as a candidate.

The power supply was repaired after not functioning. If there are issues with the power supply or any other club filed equipment please report it to the club officers.

New Member Applications:

Michael Dashniaw, Robert Tiffany and Raymond Frappier were voted into the club.



## **Dealing with In-Flight Failures**

<u>Model Airplane News</u> <u>How-tos</u> 2 Comments



Sooner or later, every pilot will encounter a situation where something within fails during flight. Even though you may not be able to predict all types of malfunctions, it is important to know some common problems and how to react when a nalfunction occurs. Let's explore some unknowns — electrical and structural failures, pre-flight problems, and common engine issues. While not every situation can be prevented, it is best to be ready for when, and if, they do arise.

### **Electrical failures**

t is important to always use good-quality equipment. Today, manufacturers usually list the components they recommend heir specific airframe. These can include heavy-duty switches, redundant battery systems, voltage regulators, and so fort This is a good place to start but if you have any doubts, seek the advice of other experienced giant-scale enthusiasts.

Generally, I think it's best to use electrical accessories from the same manufacturer of your radio system so everything is consistent throughout your aircraft. Dual battery packs are preferred to power the receiver with two separate switches and neavy-duty servo extensions throughout the entire airframe. For those that prefer 4.8V or 6V (4 or 5-cell) Ni-Cd or NiMF patteries, a voltage regulator is not needed. Newer LiPo and lithium ion packs require the use of a voltage regulator for power. Using higher amounts of voltage to power a servo will increase the overall torque, if the servo is designed for high roltages. Using higher voltages with servos intended for 4.8V can lead to servo damage and failure. Always check the specifications for your electrical components and follow the factory-recommended settings.

Also, when it comes to airborne battery packs, you should always charge, cycle and/or balance them properly for maximu performance and lifespan. It is also important to routinely check all the electrical connectors and monitor battery voltage petween flights including the engine's ignition battery. Engine vibration can take a toll on the aircraft, and can lead to electrical components becoming disconnected or fail.

Over the years, I've had situations arise where either a battery, or a voltage regulator failed. As voltage begins to decrease /ou'll find that the aircraft's response is becoming rather sluggish in the air. Should this happen to you, decrease throttle

prepare for an emergency landing. Keep control surface corrections at a bare minimum and once safely on the ground, ch your battery voltages. It is not uncommon for one of the two battery packs in a redundant setup to fail. Don't push a bad situation.

## Wing failure and flutter

While building a giant-scale model, it's important to follow proper build practices to ensure a structurally sound aircraft. Wing panels have to withstand the forces that act upon it during any given flight so don't take shortcuts with wing construction. Ensure the spars are installed properly. If the plans show the use of shear webbing that connect the upper an ower spars, ensure that the balsa grain is in the proper direction. For the best strength, the grain should be in an orientatic hat is perpendicular to the spar and not running span-wise. Since giant ARFs have become so popular, I think it is very mportant to really check out all the critical areas within the wing, and the airframe. If you feel an area on an aircraft appe questionable, don't be afraid to reinforce that area. Spending a few extra hours reinforcing a spar, a servo mount, or any other area can save a lot of grief down the road.

Dne summer, while pulling out of a vertical down-line, I experienced "wing flutter" on an all-composite aircraft. The vingtips began to flutter which resulted in stripping out both aileron servos in flight. One servo was locked at full leflection! Immediately, I throttled back and the aircraft began to roll. I was able to stabilize the aircraft while it was in a constant roll and applied the inputs to perform a 180-degree rolling circle to bring the model to the outer edge of the runw Decreasing altitude with throttle management and various rudder and elevator corrections, I waited for the airplane to be in upright position and forced it onto the ground. Post flight inspection showed that the wing's trailing edge and the ulerons' leading edges had de-laminated in flight. A crack was also evident on the wing at the end of the wing tube. Surprisingly, the fuselage and the tail were in perfect condition! It was difficult to predict this type of failure as the entire uircraft had a full-composite fiberglass, Kevlar, and carbon-fiber airframe. The important thing is to keep flying the plane ind don't just give up.



Two receiver switches and a minimum of two flight batteries to power the receiver are mandatory for all giant-scale mode is in the event that one component stops functioning, the aircraft will have power the pilot will be able to land the model safely.

## **Control direction**

<sup>3</sup>ar too many pilots have lost their models as a result of having the control surfaces reversed. To prevent this, perform a control surface check before takeoff. Check the direction of each control surface and from behind the aircraft. Don't perform he check with your plane inverted on a stand. It's too easy to get confused about what's up and what's down. If you sent your radio system in for service, perform a ground check for all your planes using that transmitter to ensure no settings he been accidentally changed.

Finding reversed controls once in the air is a bad thing. Only an experienced pilot can react quick enough and apply the control inputs needed to safely return the aircraft back to the runway. As a tip, let's say you notice the ailerons are reverse after takeoff. It is crucial to switch to using only throttle, rudder, and elevator to get the airplane back on the ground if it i oo difficult to use reversed ailerons inputs.



Jsing twist-tie clamps from Sullivan Products is the most effective way to keep fuel lines from coming loose while an urcraft is in the air.



After you notice a problem with how your gasser operates, its best to remove the carburetor and ensure that no debris is found. Shown here is the carburetor on a Desert Aircraft 120cc engine.

## **Engine Failure**

Gasoline engines have a strong reputation of being reliable. However, proper setup is key for the engine to perform prope Always ensure the throttle linkage is firmly secured and that the throttle travel volume is similar between the high and the ow throttle setting. A reliable idle and a smooth transition to maximum power is also mandatory.

A variety of synthetic oils exist today that have a recommended mix ratio of 100:1. It is extremely important to precisely neasure the oil and gasoline quantities. Always go through the proper engine break-in process and if an engine is not performing as desired, don't attempt to fly the aircraft. Also use fresh fuel and high-quality fuel filters to ensure that debr loes not find its way to the carburetor. While all giant-scale gasoline engines will exhibit some level of vibration, excessi vibration is typically caused by an unbalanced propeller or an engine that is inadequately secured. Always check the engi s properly mounting bolts and that the firewall is properly glued in place.

When an engine abruptly quits, you have to react quickly. Get the nose down relation to the horizon and keep the airspeet a moderate setting to avoid a tip stall. Speed is important! Occasionally, the engine will quit when the aircraft is too far fr he runway or too low to the ground. If this occurs, quickly observe the surroundings to find an area that is flat and safe fc he model. Don't try to stretch the approach! Attempt to land the aircraft in that area with a minimal flight speed as it contacts the ground. For a giant aerobatic model, flaring the aircraft at a 20-degree angle of attack before it touches the ground will help minimize any damage.



When an engine failure does occur, like the left engine on this twin, a pilot must be prepared to execute an emergency anding without hesitation. (Photo by David Hart)



Always perform a visual inspection on certain critical areas, like the elevator joiner on this beautiful aircraft. Typically, stress cracks will appear before a given area fails completely.



Despite the fact that structural failures can occur at any time, a pilot must always react with safety as the most important concern. Always keep the aircraft away from the crowd and make every last effort to land the aircraft. (Photo by David Hart)

## **Final thoughts**

As an RC pilot, you must always be ready for the unexpected, as a failure can occur at any point during the flight. Try to igure out what's wrong, make your decisions quickly and maintain airspeed. The best way to avoid problems in the air is set up your airplane and its equipment properly while still on the workbench. BY JOHN GLEZELLIS



The **Curtiss P-40 Warhawk** is an American single-engined, single-seat, allmetal <u>fighter</u> and <u>ground-attack aircraft</u> that first flew in 1938. The P-40 design was a modification of the previous <u>Curtiss P-36 Hawk</u> which reduced development time and enabled a rapid entry into production and operational service. The Warhawk was used by most <u>Allied powers</u> during World War II, and remained in frontline service until the end of the war. It was the third most-produced American fighter of World War II, after the <u>P-51</u> and <u>P-47</u>; by November 1944, when production of the P-40 ceased, 13,738 had been built,<sup>[3]</sup> all at <u>Curtiss-Wright Corporation</u>'s main production facilities in <u>Buffalo, New York</u>.

P-40 Warhawk was the name the United States Army Air Corps gave the plane, and after

June 1941, the <u>USAAF</u> adopted the name for all models, making it the official name in the U.S. for all P-40s. The <u>British</u> <u>Commonwealth</u> and <u>Soviet</u> air forces used the name **Tomahawk** for models equivalent to the original P-40, P-40B, and P-40C, and the name **Kittyhawk** for models equivalent to the P-40D and all later variants.

P-40s first saw combat with the British Commonwealth squadrons of the <u>Desert Air Force</u> in the Middle East and North African campaigns, during June 1941.<sup>[4][5]</sup> <u>No. 112 Squadron Royal Air Force</u>, was among the first to operate Tomahawks in North Africa and the unit was the first <u>Allied</u> military aviation unit to feature the "shark mouth" logo, <sup>[6][7]</sup> copying <u>similar markings</u> on some Luftwaffe <u>Messerschmitt Bf 110</u> twin-engine fighters.<sup>[6] [N 1]</sup>

The P-40's lack of a <u>two-speed supercharger</u> made it inferior to <u>Luftwaffe</u> fighters such as the <u>Messerschmitt Bf 109</u> or the <u>Focke-Wulf Fw 190</u> in high-altitude combat and it was rarely used in operations in <u>Northwest Europe</u>. However, between 1941 and 1944, the P-40 played a critical role with Allied air forces in three major theaters: <u>North Africa</u>, the <u>Southwest Pacific</u>, and <u>China</u>. It also had a significant role in the <u>Middle East</u>, <u>Southeast Asia</u>, <u>Eastern Europe</u>, <u>Alaska</u> and <u>Italy</u>. The P-40's performance at high altitudes was not as important in those theaters, where it served as an <u>air superiority fighter</u>, bomber escort and <u>fighter-bomber</u>. Although it gained a postwar reputation as a mediocre design, suitable only for <u>close air support</u>, more recent research including scrutiny of the records of individual Allied squadrons indicates that this was not the case: the P-40 performed surprisingly well as an air superiority fighter, at times suffering severe losses, but also inflicting a very heavy toll on enemy aircraft.<sup>[9]</sup> Based on war-time victory claims, over 200 Allied fighter pilots – from the UK, Australia, New Zealand, Canada, South Africa, the US and the Soviet Union – became <u>aces</u> flying the P-40. These included at least 20 double aces,<sup>[10]</sup> mostly over North Africa, China, Burma and India, the South West Pacific and Eastern Europe. The P-40 offered the additional advantages of low cost and durability, which kept it in production as a ground-attack aircraft long after it was obsolescent as a fighter.

### Upcoming Events:

10/6 Business Meeting at the VFW in Florence MA. Voting in for new Treasurer will occur (Dinner @ 6:30 Pasta w/Pulled pork and sauerkraut by Chef Ron.)

10/9 Great New England Electric Festival

10/22 Fall Field Cleanup Party

11/4 Business Meeting at the VFW 7pm (Nominations for officers and Board of Directors)

#### **OTHER CLUBS**

10/8 NCRCC Tailgate Swap Meet hosted by NCRCC Green Rd, Ellington CT.

10/23 Swamp flyers swap meet



Hampshire County Radio Controllers Invite you to attend our

# GREAT NEW ENGLAND ELECTRIC FESTIVAL

A Non-Competitive Event

Sunday October 9, 2022 26 Honey Pot Road, Hadley, Massachusetts

Registration 8AM - 9AM All Electric Flying 9AM to 3:00PM Other Aircraft Types After 3:00

All Types of Electric Aircraft Welcome "Bring What You Fly - Fly What You Bring A Place To Meet New & Old Friends"

<u>AMA Sanctioned</u> - Current AMA Required 1500' Grass Runway Primitive Camping Available Saturday Night Food Available for Purchase – Raffles - Prizes Please bring one item of nonperishable human or pet food/toy to donate to local charities

> All Clubs, Members and Guests Welcome Landing Fee **\$15** per Pilot (Lunch Included)

For More Information & Weather Cancellation Announcements Visit Our Club Web Site at <u>www.hampshirecountyrc.org</u> or Our Club Facebook Page at <u>www.facebook.com/groups/148353592007739/</u> or Contact: Alan M. Crawford, CD - <u>acrawford197@comcast.net</u> - (413) 351-5715 OR Santiago Mercado, Co-CD - <u>santme2000@hotmail.com</u> (413) 627-9250

AS ALWAYS SPECTATORS ARE WELCOME.





## FALL FIELD CLEANUP PARTY

Please come out to the field and help your fellow club members mothball the club property for the upcoming winter. More hands make easier work.

### Saturday October 22 2022

Rain Date Saturday October 29th 10AM to approx. 12PM At the flying field

Some of the tasks that need to be completed:

- Take down large canopy cover
- Cut back sumac around property perimeter with brush hog
- Organize and clean out storage sheds
- Take down "Welcome" sign at entrance
- Take in frequency pins
- Take down American flag and wind sock
- Clean out bird houses
- Pull down bee traps
- Maintenance mowing equipment
- Bring in safety barriers
- Bring in first aid kit

Check for rain delay announcements on our club Facebook page or our website prior to coming to field

### Bring planes to fly after work is completed weather permitting.







## **Please support your local Hobby Shops**



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