

HCRC Flyer



March 2021



AMA Charter #341





From the President's desk.....

Hello All,

Just a quick few words.....

As usual for this time of year, I'm getting excited for the upcoming flying season at the field. I have been busy all winter repairing and modifying a whole basement full of aircraft. I'm sure most of you have been doing the same as well. It's what we do.....I even remodeled my workshop. Long overdue!! What is new for me though is I have added several nitro planes to my collection and I am really looking forward to getting back into that aspect of the hobby once again. I also joined an RC Float Plane group on-line and plan to try my hand at flying off the water (and hopefully not *into* the water!). I'm also looking forward to building on my improved flying skills from last season with even more consistent trips to the field. Practice, practice, practice. I am also looking forward to getting back together with all you guys and gals to see what's new with you and your new projects and acquisitions and just hang out. So here's to hoping Covid continues to downgrade itself out of existence so we can get back to some normalcy. But until then social distancing and masks remain a necessity until further notice I'm afraid.

As usual the Events Committee has been hard at work planning and scheduling a slate of events for this upcoming flying season. We're hoping Covid doesn't require cancelling as many of them as it did last year. Details for these events were announced at the last business meeting. Keep an eye out in the newsletter, bulletin boards and on our Facebook page for details. It already started with a day of flying on New Year's Day with nice weather, a good turnout, a pit fire and some hot food. The next club event planned is the spring field cleanup on 4/17 (rain date 4/18). Further details to be announced soon.

Also keep watching your email for the gate code change announcement. That should go out on 2/28 to all members in good standing with their dues. The combination will be changed on 2/28 or 3/1. While on this subject please keep in mind that the road leading in to the field can be very soft and muddy this time of year. Please try to keep ruts to a minimum if you find yourself heading over to the flying field in the next several weeks. Thanks.

Let's hope for great flying weather again this coming season and *I'll see you out there!*

Mike

HCRC Meeting Notes from Thursday, February 4th, 2021

No Quorum Present. 14 Members including 3 Executive Members present

Executive Members present: Mike Shaw, Dan Kapinos and Bill Ewers

Members present: Juan Ortiz, Juan Salgado, Anthony Brodin, Mike Booth, Alan Crawford Sr. Santiago Mercado, Pat Malone, Dan Hunt, Andre Bouchard, Dennis Walker, and Bob Prosciak.

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

2021 Renewals have been mailed and are now due.

Alan Crawford is stepping down as lead flight instructor. We are looking for a volunteer to lead the flight instruction program next year. Alan will be available for guidance.

Mike Shaw is preparing an order for club merchandise - hats and shirts. There will be an order sheet on the website and the all orders are due to Mike by March 1st.

The gate code will be changed on March first. Paid up members will receive the new code before the change. This is privileged information and not to be given out to anyone. If you forget the code, please call or email one of the officers and request it.

The project and maintenance team is looking for volunteers. The major push this year is to get 10 mowing volunteers and to paint everything behind the flightline.

BOD Meeting Items:

Alan Crawford presented a proposal to park his RV in the club owned property across Honey Pot Road from the club field. Alan would provide:

1. Security
2. Lawn Mowing
3. \$200/month rental fee

Club Website: We are looking for a new webmaster to periodically update the website.

Safety Review:

No safety items discussed this week.

New Member Applications:

No new members were voted into the club.



Spring Cleanup Reminder



Spring cleanup at the field is scheduled for April 17 (rain date 4/18). Please come out and help us get set up for another season of great flying. There will be a list of chores in next newsletter. Starting time 9:30 am.

There will be a brief meeting for the mowing team around 11 am. Team members should make every effort to attend. There will be familiarization for the new mower, and shed keys will be issued. We will discuss pre-flight and post-flight checks for the mowers. Also the sectioning of the field and how we mow them. This will put everyone on the same page, and provide consistency in our work, making it easier for all.

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New Club Merchandise Order

Hello All,

Our club has been fortunate enough to have added many new members to our club recently. It was suggested that now would be a good time to offer club apparel once again.

The last chance to place an order is at the March business meeting. I will place the order the following day with our supplier. Please bring cash or check and see me before or after the meeting. The flyer is attached with all the details.

Thanks,

Mike Shaw

HCRC CLUB MERCHANDISE

Clothing has a 3-4 week lead time minimum.
Stickers & patches are in stock and available at request.

POLO SHIRTS: Sizes SM - XL \$22
Sizes 2XL - 5XL \$24



COLORS: Black, Gray, Green & Red

ADDITIONAL \$5 TO ADD YOUR NAME

CREW NECK SWEATSHIRTS: Sizes SM - XL \$22
Sizes 2XL - 5XL \$26



COLORS: Black, Gray, Green & Red

50% Cotton, 50% Polyester
(Club Logo & Name not shown)

ADDITIONAL \$5 TO ADD YOUR NAME

HATS: 1 Size (Adjustable) \$22



COLORS: Black, Gray & Red

STICKERS: 4" x 3" \$2



PATCHES: 3" x 3" \$3



Patches on Personal Clothing \$15

If you would like to have your supplied club patch installed on your personal item of clothing, this can be done for \$15 by bringing items to:

Ann Marie Whelihan
Parsons Sewing Connection
2005 Riverdale Street
West Springfield, MA.

Left Turning Tendencies in Model Aircraft.

By Dan Kapinos

Model aircraft (and full scale aircraft) like to turn left. It happens mostly during the take off roll and during the climb out. There are four forces that make this happen. Torque, P-Factor, Gyroscopic precession, and Spiraling slipstream.

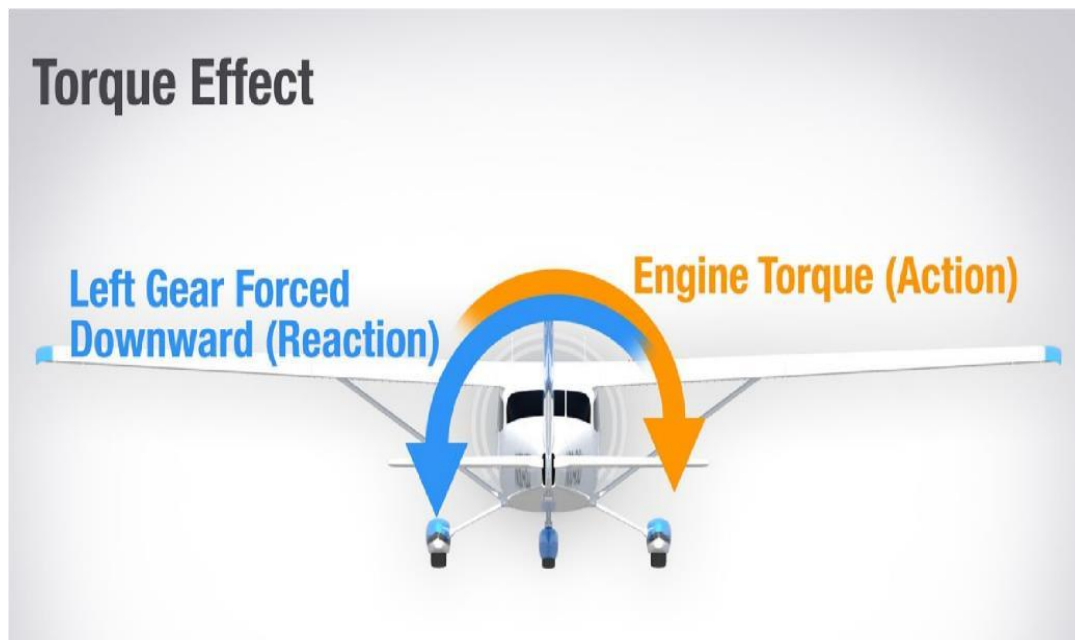
Most of our models are, fixed wing, tractor propeller (cw rotation when viewed from the rear), tricycle or conventional landing gear.

High or low wing doesn't matter. Glow or electric doesn't matter. The forces are the same.

Torque

Torque, comes from Sir Isaac Newton. Newton's third law states that "for every action, there is an equal and opposite reaction".

As you throttle up your model for takeoff, the right-turning direction of your engine and propeller forces the left side of your airplane down toward the runway. When the left side of the airplane is forced down onto the runway, the left tire has more friction with the ground than the right tire, making your aircraft want to turn left.

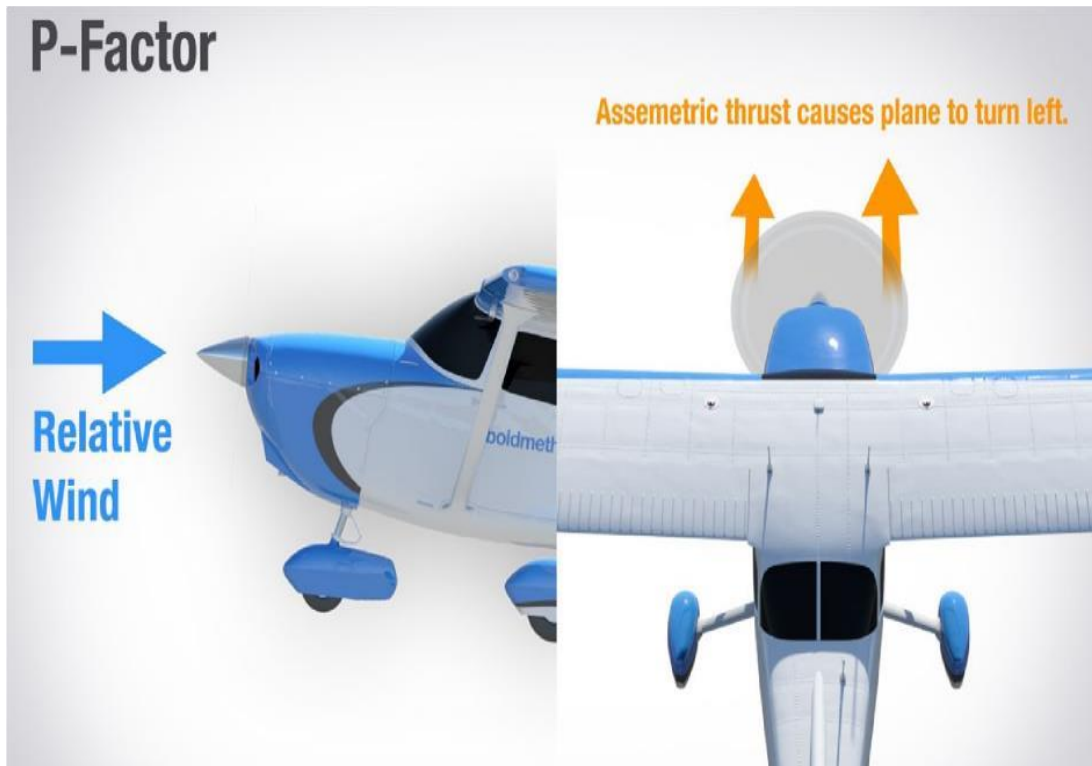


P-Factor

P-Factor, which is also called "asymmetric propeller loading", happens when the downward moving propeller blade takes a bigger "bite" of air than the upward moving blade. This happens in two scenarios:

- 1) Your plane is flying at a high angle-of-attack (takeoff and slowflight, are good examples), and
- 2) You're taking off in a tail-wheel airplane.

In both of these scenarios, your downward sweeping blade is at a much higher angle-of-attack than your upward sweeping blade. And with a higher AOA, the downward sweeping blade creates much more thrust (or lift), making your airplane want to yaw to the left.

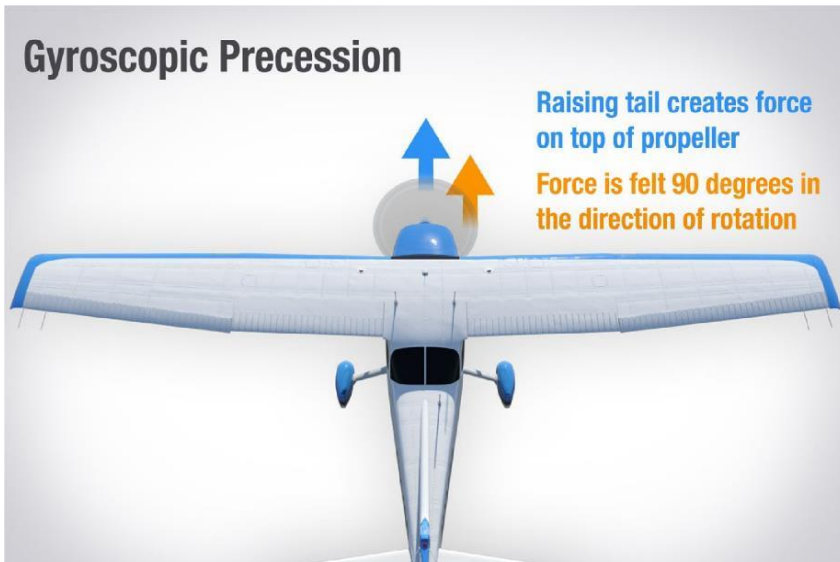


Gyroscopic Precession

A spinning propeller is essentially a gyroscope, which is a spinning disc. That means it has the two properties of a gyroscope: **rigidity in space and precession**.

Precession happens when you apply force to a spinning disc. Here's how it works: you apply a force to one point of the disc, and the effect of that force is felt 90 degrees **in the direction of rotation of the disc**.

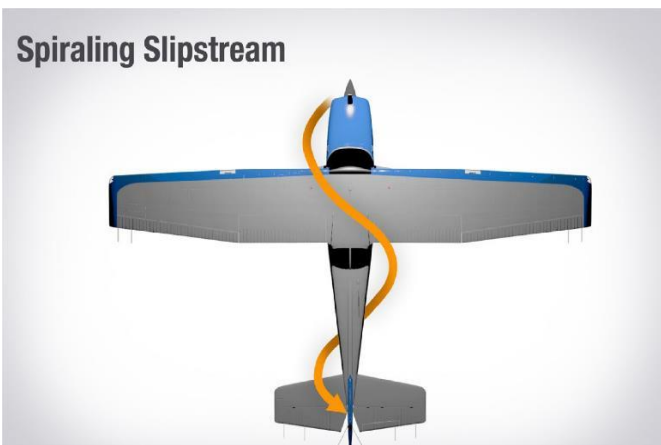
For the most part, this only applies to tail-wheel airplanes when they lift their tail off the runway during takeoff. As the tail comes up, a force is applied to the top of the propeller. And since the propeller is spinning clockwise, that force is felt 90 degrees to the right. That forward-moving force, on the right side of the propeller, creates a yawing motion to the left.



Spiraling Slipstream

Spiraling slipstream is the fourth and final left-turning tendency. It happens when your prop is moving fast and your plane is moving slow. And there's no better example of this than takeoff.

During takeoff, air accelerated behind the prop (known as the slipstream) follows a corkscrew pattern. As it wraps itself around the fuselage of your plane, it hits the left side of your aircraft's tail, creating a yawing motion, and making the aircraft yaw left.



There are ways to compensate and correct these tendencies. First and foremost is use of right rudder on takeoff, and to keep the aircraft on the center line of the runway. Corrections can also be built into your model. Such as shim the engine/motor a few degrees of right thrust. Or position the vertical stabilizer with the back side a few degrees right when you glue it in.

So now you know why your aircraft shoots left for the tall grass when you slam the throttle on take off, and you don't use enough right rudder. I hope this gives you a better understanding of some forces at work on our models, and helps you become a better pilot.

Upcoming Events:

- Business Meetings for 3/4 and 4/1 both at the **VFW (no food)**.
- Field Spring Cleanup on 4/17 (rain date 4/18) start time 9:30AM.

Short C-23 Sherpa

Airplane of the month :

The **Short C-23 Sherpa** is a small military transport aircraft built by [Short Brothers](#). It was designed to operate from unpaved runways and make [short takeoff and landings \(STOL\)](#).^[1] It features a large squared fuselage with a full-width rear cargo door/ramp. The *C-23A* and *C-23B* are variants of the [Short 330](#) and the *C-23B+* is a variant of the [Short 360](#). Eight aircraft went to the U.S. Army and the remaining seven to the U.S. Forest Service. The Test Pilot School's aircraft were retired in 1997.^[6]

U.S. Army

The eight former USAF aircraft were used for test duties at different units; two were re-designated as JC-23A.^[6]

The Army purchased four civil Short 330 aircraft to replace the [DHC C-7 Caribou](#) being used to support the [Kwajalein Missile Range](#). These were not given a C-23 designation, and were retired in 1992.^[6] In 1988, the Army ordered ten new-build Short 330s designated C-23B to replace the DHC C-7 Caribou used by the U.S. Army National Guard Aviation and Repair Activity Depots. In 1990, a further six were ordered.^[6]

When the Army wanted 20 more C-23s in 1990 the production line had closed; second-hand Short 360 aircraft were purchased instead. Designated the C-23B+, these were modified from the original single tail to the twin-tail and cargo ramp of the other C-23Bs.^[6] In 1994, another eight aircraft were converted to replace the [DHC UV-18 Twin Otters](#) used in Alaska.^[6]

During [Iraq War](#) (2003–2011), the C-23 served the Army's intra-theater needs of cargo and personnel transport. It provided an economic alternative for transporting some 20 people or three pallets of cargo when speed was not critical.^[2]

As part of the U.S. Army's [Constant Hawk](#) intelligence gathering program, five Short 360s were modified for use in Iraq and flew in theater between 2006 and 2011. A further two modified aircraft collided in mid-air before delivery to Iraq. The Constant Hawk aircraft were not given a military designation.^[6]

On 13 June 2007, the [Alenia C-27J](#) was selected to replace the C-23 in U.S. Army service.^{[8][9]} A total of 43 C-23s were in service with the U.S. Army as of November 2008 (all US C-27 aircraft were transferred to the US Coast Guard in 2012 due to budget shortfalls).^[10] The C-23 Sherpa was retired from the Army National Guard in January 2014.^[11] As part of the [National Defense Authorization Act for Fiscal Year 2014](#), 8 C-23s may be transferred to the State of [Alaska](#) to operate from short rural runways for search-and-rescue and medium-lift missions.^[12]

In December 2014, it was announced that US would supply eight aircraft to [Estonia](#), [Djibouti](#), and [Philippines](#).



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