REBEL AIR

Engine Running. Grim Reaper Harvesting! The Invisable Blades Of Death!

Hello my fellow aviators and beloved mechanics. I am doing this article and video on behalf of a request from a flight school. At this flight school a renter stopped the aircraft, and got out to check the wing clearance with a hanger. All the while leaving the engine running! Placing his safety and the security of his aircraft in the hands of the parking brake. These hands of the parking brake may be the very hands of the Grim Reaper!

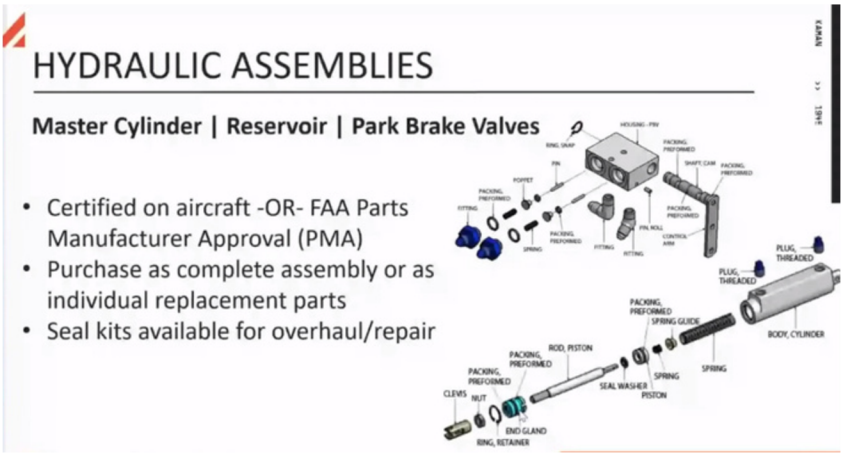
This is a really bad idea my friends! This is actually ringing the door bell to invite the Grim Reaper to come out to play with you! It is something that you need to train for now. For this will come up in your commercial operations once you get to the flight line. ***And it does have deadly consequences!***

When I was at your stage in my aviation career I was repeatedly told not to leave the parking brakes on. The reason given to me was that the brake lines could rupture due to the temperature changes between night and day. After becoming a aircraft mechanic I routinely maintained the brake lines on many aircraft. These hoses are certified, and are very reliable. I guess one could rupture if left under pressure overnight, but I do not believe this is a valid reason. The valid reason is because the parking brakes on aircraft are just unreliable at best. This is the real reason why we chock the wheels on our aircraft.

What Exactly Are Aircraft Parking Brakes?

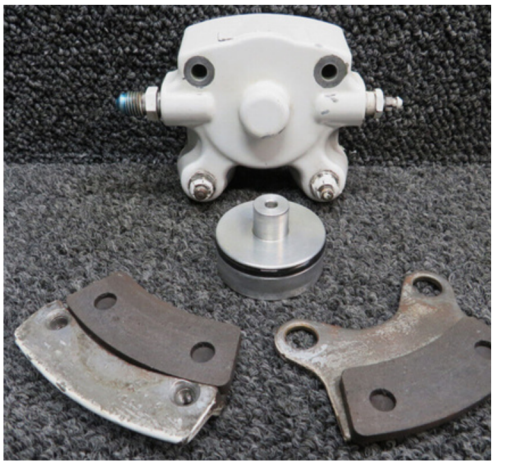
The parking brake system on you aircraft is very simple. It consists of just a hydridic reservoir, which feeds the hydridic brake lines, and then a simple check valve to lock in the pressure to hold the brake linings on the rotor.

These small componets are smaller then your hand, and use tiny rubber “”O-rings” to hold the hydraulic pressure on the brake linings. The parking brake system is subject to many possible failures. Such as low hydraulic levels, or worn out O-rings with cracks or excessive wear.



This is the typical parking brake system on your aircraft. All the components easily fit into the palm of your hand. Notice that it is just inexpensive small rubber “O-rings” holding the pressure on the brakes. These small components are at a disadvantage to hold a aircraft in place. Especially when the aircraft weighs 1,500 pounds or more!

The hydrulic pressure built up by the master cylinder is then put into the brake caliper. Here the hydrulic pressure pushes against a puck with a O-ring. This puck in turn pushes the brake linings against the rotor attached to the wheel. Once again, these components are small enough to fit into the palm of your hand. This system just is not big enough to hold your 1,500 pound or more aircraft.



The brake caliper on a typical aircraft. You can see how small the caliper is in relation to the aircraft. The photo to the right shows the caliper taken apart. The only thing applying the pressure to the brake linings is the puck in the center. If you look closely you can see the $2.00 black O-ring which is the only real part holding that pressure!

Why We Do Not Use Parking Brakes?

Over the thirty years of being a flight instructor I have seen very little taught about the parking brakes. At my flight school it was limited to how to set the parking brakes. How to release the parking brakes. And lastly, if you use the parking brakes ***I will beat the living daylights out of you!*** For you see the parking brakes cause more problems then they are worth! Just ask a Jet Blue crew who injured 15 people and blew out four of the main tires on a airbus A320!

This incident occurred on August 26, 2010 at Sacramento, California. The Jet Blue Airbus 320 crew had engaged the parking brakes while waiting for a delayed clearance for take off. When cleared for take off the crew forgot about the parking brakes being on, and this is very easy to do as we almost ***never*** use the parking brake!

Jet Blue with blown out tires from landing with the parking brakes on.

Upon landing the brakes held up just enough to blow out four of the main tires and start a fire. Fifteen passengers were injured. I thought for sure these two pilots would be fired. It turned out that they were not fired or even disciplined! It was determined that the landing check list did not contain a section to ***"check the brakes."***

Believe it or not the parking brakes are not listed on most check lists. Once the parking brake is set it is hard to notice. It is easily overcome by the power of the engine, and the pilot does not even realized it is engaged. The taxi or take off seems sluggish. ***Must be density altitude!*** And the pilot writes it off to density altitude that easily. Then upon landing both main tires usually blow out. If lucky just a horrible "flat spot" is put on the tire requiring it to be replaced.

This happens at flight schools and aircraft rental businesses on a fairly frequent basis. The plane is disabled on the runway. Once at the maintenance hanger it sits for days as the new tires are obtained. All the while the student or renter complains that the plane was ***"not properly maintained."*** Not even realizing that they had left the parking brake on! The costs for the flight school are tremendous! Each tire costing $200 to $300. Maintenance labor costs at about $500 if not more. Lost revenue flights while the plane is being worked on in the thousands of dollars. Then of course the renter tells everyone how bad the maintenance is at the flight school. This is a brutal attack on the flight schools. I pray that this article and video may help with this situation.

Remember that these costs are have to be paid. It is paid by the other student pilots and renters. Like all businesses the operating costs have to be passed on to the consumer! Lack of knowledge and understanding of aircraft systems adds so much unnecessary costs to flight training.

Parking Brakes are Ineffective Against the Reaper!

Most of all airplane parking brakes are just that. Parking brakes ***ONLY!*** They are not designed to hold the aircraft in place while the engine is running. If the aircraft moves just an inch the brakes are more then likely to be overcome and the plane is moving. If the plane wiggles or hops a bit due to wind this could cause failure. Just merely having the engine running can cause brake failure! For once the wheels move just a little bit the brakes will fail. As an aircraft mechanic and flight school owner I would never allow my renters to use the parking brakes at all. ***They are too easily forgotten. They are just too unreliable.***

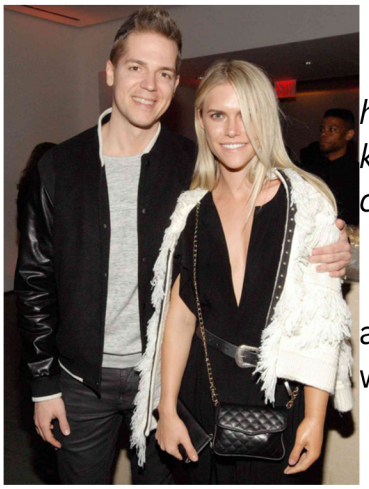
The Invisible Sickle of the Grim Reaper.

Even when you have applied the brakes, and everything seems safe the Grim Reaper awaits! There are two reasons why you should never leave the aircraft with the engine running. The first is that the propeller blades become invisible. We know they are there, but our passengers do not! The second is that the parking brakes on aircraft are notoriously famous for failing when you need them the most! They are "parking" brakes at best. They are not designed to hold the aircraft with the engine running. They are not even good at holding the plane when parked! Once again, this is the reason we always "chock" the wheels on an aircraft when parked.

Model Lauren Scruggs Kennedy. She was only 22 years old when the accident occurred.

Passengers cannot see the propeller, nor are they even aware of them being there! It makes no difference if you warn them about the dangers. If they can not see it for some reason it does not exist. There are many accounts of passengers walking right into the propeller with devastating results. Just to give an example is that of a model named Lauren Scruggs Kennedy. Lauren walked right into a propeller in December, 2011.

The pilot had fully explained the dangers, and told her to exit the plane by going to the rear of the aircraft. She of course nodded her head that she understood. Then promptly walked in front of the aircraft before the pilot had a chance to shut down. She lost her left arm and left eye to the unforgiving propeller blades. By the grace of God she survived this accident! She is still alive and now thriving with her own family.


Lauren with her husband Jason.

The link to her story is at:

https://people.com/human-interest/lauren-scruggs-kennedy-finding-love-jason-kennedy-after-propeller-accident/

We are so happy that Lauren survived her horrible accident, and is now living a full life! Our prayers are with her and we wish her the best!

If you have not started working as a pilot you may be saying the pilot is at fault. In the report the pilot was quoted, "Upon noticing that she was exiting in front of the strut, the pilot leaned out of his seat and placed his right hand and arm in front of her to divert her away from the front of the airplane and the propeller," the report states. "He continued to keep his arm extended and told the passenger that she should walk behind the airplane." The pilot did everything he thought he needed to do, but the ONLY thing he really needed to do was to shut down the engine.

A more recent example is that of Amanda Gallagher, a photographer, who backed into the running propeller blades in October, 2024. This happened in Derby, Kansas while she was taking photos of a skydiving operation. While photographing skydivers loading into the jump plane she backed right up into the propellers.


Amanda Gallagher who perished after backing up into the propeller blades.

Amanda was rushed to the hospital, but unfortunately succumbed to her injuries. Let us pray for her and for her family. Her story may be viewed at:

https://www.ksn.com/news/local/wichita-photographer-amanda-gallagher-dies-in-propeller-accident-remembered-as-a-bright-light/

Remember that talking is perhaps the least effective way to communicate. Just ask any married couple! Then you add in the unfamiliarity of airport operations. The noise of the engine running, and other aircraft operating. You just don't stand a chance explaining things to passengers. They need to be guided by the hand. That is your job as a pilot. That is your duty when operating an aircraft.

Please consider your own personal safety. If you leave the aircraft while the engine running to check on something...***will you forget about the invisible blades?*** Are you prepared to have the tires blow out on landing just because you forgot that the parking brakes were on? Will you now stop the hands of the Grim Reaper by shutting down when people are outside your aircraft? These questions are perhaps a little condescending. However, they are questions that one would never even think about unless we talked about them. As with most flight training this is something you need to think about. We all need to think things through many times before we can take right actions when needed!

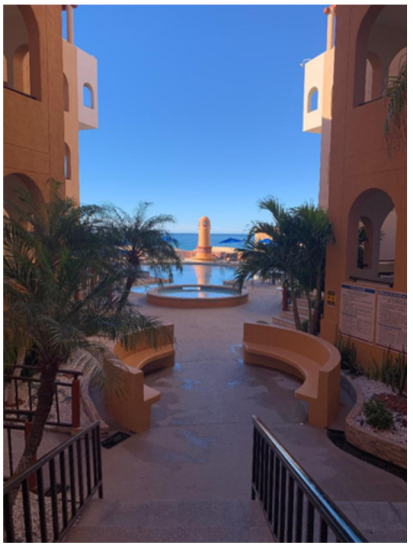
Please email me at rmriter@aol.com if you have a topic you would like me to cover. Your future as an aviator or aircraft mechanic is most important to me!

Please consider supporting my efforts by requesting this flight patch! They are free but I do ask for a donation to help cover the costs. I am also available for flight reviews and flight training. If you can put together a couple people I can come to your airport! I would be happy to speak to your group about the many issues facing aviation. Most importantly what we are doing to fix them!

I am also able to offer advanced flight training in a multi-engine Piper Seneca II. Let's have some fun taking you in and out of Class Bravo airports! Going to Las Vegas and seeing a show. Maybe down to San Diego to walk around the Gas Lamp District with it's many restaurants! Perhaps, even going off the California coast to go whale watching! These trips meet the requirements for your multi-engine commercial rating. Your flight training can be as exciting and fun as you want it to be!

Please read the article and watch the video on Whale Watching by Plane! You can learn about conducting Sight Seeing Tours to build your flight time!

Please look up the video titled, “Fly Mexico!” This is on YouTube. Learn how to conduct international boarder crossings. See the beautiful beaches in Mexico. Be able to go out and pet a baby Gray whale! Being a pilot is one of the most exciting professions in the world. It is filled with new places, different people, and seeing the world in it’s majestic beauty!



The beach at San Carlos, Mexico. One of the most beautiful places I have seen!

I pray that you have enjoyed this article and video about the Grim Reaper! You can find my articles at ***AviatorsMarket.com.*** Just search Riter and select which articles you want to see. You just have to go to documents, and then download the article!

You can also view my videos on YouTube at: ***Capt.Robert“ThatGuy”Riter.*** There are so many topics that I want to share with you! For your future as a pilot or aircraft mechanic is most important to me! For you are the next generation to face engine failures, cockpit fires, failed landing gear, and broken aircraft in bad weather. You are the next generation of ***“Silent Heroes!”***

A video of this topic can be viewed at:
https://www.youtube.com/watch?v=S0D8kSmaNpk

God Bless! Keep Flying Speed!
Captain Robert “That Guy” Riter