

MaulePilots.org

Posted: Mon Apr 13, 2009 11:43 am Post subject: Maule Park Brake Dangerous?



Hello Maule Pilots,

Last weekend my left brake locked up when I landed on pavement. It sent me into the grass. That's more excitement than I need! At first I thought it was the Scott 3200 tail wheel locked in the wrong position. Then after the dust settled, I found I couldn't taxi very well either.

Long story short, we jacked it up and found that the left brake had locked up, and the park brake clip had caught. Back at the office today, one of the airworthiness inspectors said he has investigated two maule accidents due to these clips on the brake cylinders.

Has anyone else had problems with this park brake system? These clips might disappear from my M4? I've never depended on any airplane's park brake anyway.

Thanks,

James
Spokane

Posted: Mon Apr 13, 2009 11:54 am Post subject:



I had the same problem. But at the time, I was new to tailwheels, and thought it was something I was doing. Finally, one cool, clear, calm morning, both of them locked, and over on the nose we went. I still have the prop in my hangar as a reminder. Unhook the parking brake, and safe-tie the clips down to the brake cylinders. Fixed the problem, and made landings much less interesting.

Posted: Mon Apr
13, 2009 12:40
pm Post subject:



How could the park brake lock on in flight if it was off when you departed? Surely you would have noticed it at take off? I have had a similar problem with the left brake dragging but it was noticeable when rolling the Maule out of the hangar. The problem was fixed by cleaning the master cylinder which was blocked and not allowing the brake fluid to return

fully.

One cannot consent to creep when one has the impulse to soar

Back to top

 [profile](#)  [pm](#)  [email](#)

a64pilot

 Posted: Mon Apr 13, 2009 1:31 pm Post subject:

 [quote](#)

Joined: 29 Aug 2006
Posts: 1705
Location: ALbany Ga., KABY

aussieaviator wrote:

How could the park brake lock on in flight if it was off when you departed? Surely you would have noticed it at take off? I have had a similar problem with the left brake dragging but it was noticeable when rolling the Maule out of the hangar. The problem was fixed by cleaning the master cylinder which was blocked and not allowing the brake fluid to return fully.

This isn't the first one and won't be the last. Most seem to go over on the nose. Pumping the brakes before landing should tell you if one is set. If a brake has been set, then it should be stiffer feeling than one that isn't. Disconnecting a parking brake isn't legal, but I need to myself before I become a statistic. It's not just Maules, but tail draggers get it the worst.

Back to top

 [profile](#)  [pm](#)

chestermiller

 Posted: Mon Apr 13, 2009 1:36 pm Post subject:

 [quote](#)

Joined: 04 Feb 2009
Posts: 6
Location: Spanaway, Washington


James, Looking at the picture you posted I notice a shiney spot on fuselage brace tubing. This is where the master cylinder is striking it at full rudder pedal application. This is very dangerous because at hard braking it can over stress the master cylinder shaft leading to a broken shaft at full rudder leaving you brakeless. A very exciting surprise at a most needed time. This comes from experience. Paint over the shiney spot, then adjust rudder cables on both pedals to move them back towards the pilot. Do not let the tube get touched again, that's the reason for the fresh paint. Cables do tend to stretch a bite with use. Chet

chet

Back to top

 [profile](#)  [pm](#)  [email](#)

Mr. Ed

 Posted: Mon Apr 13, 2009 2:45 pm Post subject: brakes

 [quote](#)

Joined: 26 Jan 2007
Posts: 101
Location: Not in Russia

James, Search the site on the subject, it has been discussed at length previously. Also noted that you have a pipe type plug in the master. You want to make sure it has a vent hole drilled into it. It's cold this time of year in Spokane. Go flying and have the cabin heat on which discharges right in front of the rudder peddles and the master can heat up enough to put pressure on the brake. Also, the carb heat is the identical knob to the park brake. If you pull the brake by mistake, pump the brakes for the pre landing check you just set the park brake. Even if you notice the mistake you still need to pump the brakes again after you push the park

brake knob back in to release the break.

Back to top



210TC

📅 Posted: Mon Apr 13, 2009 5:23 pm Post subject:



Joined: 12 Jan 2007
Posts: 726
Location: New Braunfels, Tx

Yep, the fella that I purchased mine from ground looped as a result of brakes. However, no one believed including me, until it happened to me (brake drag).
Since then, I HAVE NEVER SET THE PARKING BRAKE and have a little more slack in the cable.
I think Jeremy wrote about the master cylinder shaft on our older Maules having little notches or groves cut into it. If you replace with new smooth shaft I think problem will go away.
I decided to tell the truth. Maule has a Micky Mouse parking brake. Take it out and use something else, like a stick. That will end that problem.

David
www.Landshort.com

Back to top



yellowbelly

📅 Posted: Mon Apr 13, 2009 9:22 pm Post subject:



Joined: 26 Aug 2006
Posts: 26

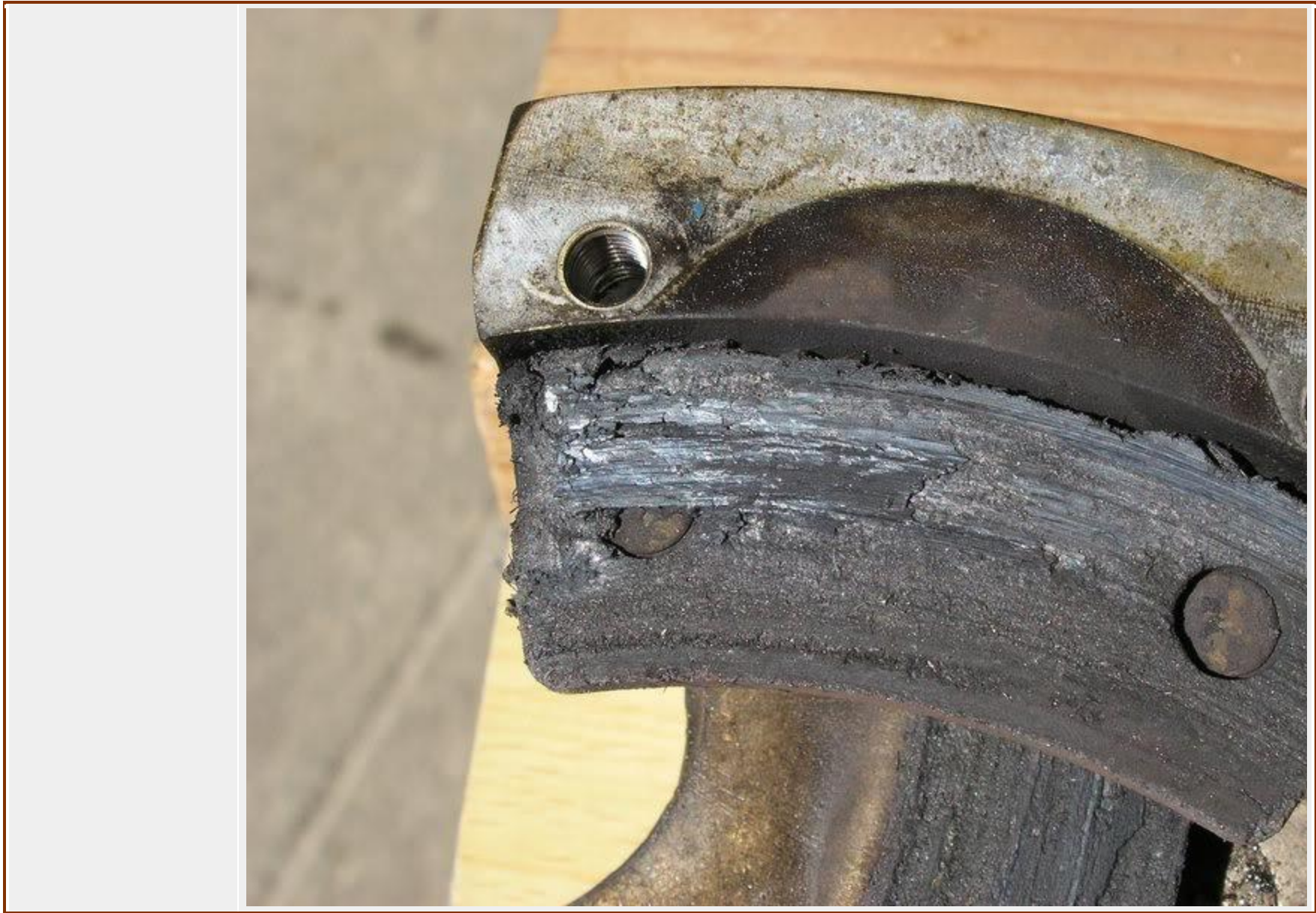
Yep,








Finished my annual a few years back and took the plane for a high speed taxi test just to get her moving. It was dusk and way too windy to fly. As I turned onto the runway, I had to use full left rudder and a dab of brake to get her through the wind and lined up. I powered up just enough to lift the tail and run down the runway to the intersection. As I slowed down and started to turn left, I glanced down at the left wheel and the brake disk was incandescent. I don't mean red - it was yellow and little sparks were blowing off it. I freaked out; thought the tire was going to catch fire, but it didn't. It cooked the brake pads tho. It was dragging on the left brake and when I looked closer, the durn little clip on the left brake cylinder was up (engaged). I had to use my toe to force it to release.

This happened to me again, but in broad daylight this time. It was a low speed event and connected, again, with a lot of left rudder and a bit of brake. When I started looking, I saw that the bridle cable between the two brake cylinders was hanging up on the scat tube fitting for the rear seat heater outlet. With full rudder and a bit of brake, it could pull the bridle tight and set the brake.

Since then I've made "adjustments" to prevent the situation from cropping up again. And, yes, Jeremy's pump of the brakes before landing is a good way to check if you are in for a surprise when the rubber meets the road.





Back to top	 profile  pm
YELLOWMAULE  Joined: 29 Aug 2006 Posts: 540 Location: AK Back to top	<div> <div>  Posted: Tue Apr 14, 2009 6:07 am Post subject: quote </div> <div> <p>The parking brake is a nice thing to have but that's why we have chocks. I don't have a "chock" knob on the panel to confuse me though! 😊</p> <hr/> <p>Live it like its your last day.</p> </div> <div>  profile  pm </div> </div>
James Joined: 21 Oct 2008 Posts: 63 Location: Spokane, WA	<div> <div>  Posted: Tue Apr 14, 2009 1:08 pm Post subject: Thanks! quote </div> <div> <p>Thanks for the information, I never used the park brake, and don't really rely on them. Anyway when the mechanic looked at my M4 he jacked up the left main. He noticed that the park brake was out less than 1/2 inch. I had not pulled it out. The wheel spun freely. I then climbed back in the airplane and added full left rudder only, with no brake. This set the left park brake solid. UG! On a tricycle gear airplane this would probably result in a flat spot, or a flat tire. In a tail dragger this could definitely result in a ground loop, and ten of thousands of dollars \$\$\$\$\$. I really appreciate the information I have received from my original post. "Carry Chocks"</p> <p>James Spokane</p> </div> </div>

Posted: Wed Apr 15, 2009 11:04 am
 Post subject:
 [quote](#)

If a screwdriver is needed or used to release the tab, it is not rigged correctly and damage is now done to the brake pushrod and to the hole in the lock tab. I would suggest examining it very carefully.
 Sometimes the plastic plug is not in correctly, holding the tab up.
 Sometimes the pull cable is not set right or the outer sheath cable and the bridle cable gets hung up on the heater tube, or the loose cable allows the bridle end to twist.
 Beware of the old style serrated pushrods. If you put Too much pressure on the pedals when locking brakes, you will need Too much pressure to release them. When you get to U ndercarriage, you may depress the pedals 15 times if you don't trust twice.
 The first press is to check for sponginess but you may have inadvertantly pulled the brake lock knob instead of fresh air or heater or carb heat, so the subsequent brake pedal press' s are again looking for sponginess in case the pilot made a mistake.
 Oops sorry, I forgot, pilots don't make mistakes.

Jeremy

www.maules.com