

## Comments regards wheels, tires and brakes on Legal Eagle XL or UL

After building and flying two Legal Eagles, first the UL version, then XL version I have had some experience with wheels, tires and brakes. My experiences off airport are not as great as some but it is not lacking. I fly in all environments and around other aircraft, mission statement called for brakes.

During building decided to use the Azusa composite, wheels and tires. This worked great until working on adding the bicycle disc brakes and wheel roundness in rotation depended on how much, or if I tightened bolts. They would be useable on grass with on need for brakes.

First flying attempt was using the Tuffy bicycle wheels with bicycle disc brakes. I had not flown in several years so was rusty, not unlike many people first flying the Legal Eagle. I liked the looks and brakes were mechanical with single lever operating both brakes with equalizer. I liked the brakes, still do. The Tuffy wheels worked great going straight ahead or more radiused turns. Calm days were good, however was flying with cross wind and got turned into it when tail dropped and rolled over, broke one wheel, prop and got a wing tip.

Enough of this, the XL was out, and the Black Max wheels, tires and brakes were next. The tires that came with kit were 2 ply, very light weight. On about 3 taxi out to runway got one of our normal weed stickers thru the tire and flat. The tires are so thin trying to repair turned out to be a no go. Tried another set of tires, after about 5 hours tread gone and had to replace again. This time I went to the 4-ply type, from Tractor Aircraft Supply, front lawn tractor type. Now we are in business. Tail wheel became front and center in that they would not stick to runway and would slide around in winds and changing directions. Solved with Soneri or RV type tailwheel lightened substantially.

Black Max brakes are a single cylinder that operates both breaks at once, works great unless the cross wind gets you when tail drops and turns you into side of runway, choice shut down or run over runway light or tall grass. Shut down, turn machine to runway, start up and go again. Not a good choice in Monument Valley Utah with narrow runway, lots of sage brush and big drop offs, oh, no matter what the wind taking off south to north and landing north to south. BIG rock south end of field. I solved this problem by install two of their master cylinders side by side with dual levers. Hand on top of stick and use left two finger to turn left and right two fingers to turn right. General information, Black Max now makes these dual master cylinder sticks. They look great. I got one of the first ones. Look into it for your Legal Eagle or other aircraft.

Last year at Oshkosh a lot of the Ultralights and light weight aircraft were running 8:00 x 6:00 tires in place of the 6:00 x 6:00. When I got home changed to these tires by Caryle. I run them at 8 psi, they work great, hard surface, grass, dirt, sand. Highly recommend these with the Black Max wheels and brakes. Not the lightest but really work and make it work it figuring out where to save weight to add them.