OHIO VALLEY KARTING ASSOCIATION SPECIAL BOARD MEETING MINUTES MONDAY, JANUARY 4, 2021

CALL TO ORDER: President Aaron Banfield called the meeting to order via Zoom at 7:01 p.m.

TIRES: Aaron Banfield reported Keith Freber is present for this meeting to discuss tires concerns. Brian Schroeder thanked Freber for jumping on and shared his experiences with his two karts reporting he went through 68 tires. Schroeder explained he spoke with several people and some noticed if they ran a five inch rim on the front, the tires didn't wear out as much. He said once the tires were overheated after ten or fifteen laps, they were on a downhill spiral. Schroeder stated at one point they questioned our track but they also ran the Buckeye Karting Challenge. He asked if the compound is something we should look at or have two different compounds. Keith Freber responded the number of tires you went through is very unusual and he doesn't know about Schroeder's setup. Schroeder reported tread wore off for a handful of sportsman and senior drivers and senior drivers mentioned their rear tires were getting a little more wear. He said maybe they need to go wider than 4.5 on rims. Freber explained the stamp on the side is not indicative of the rim size and said a five inch would be standard for most karts. Rainer Pansch reported the Vets had no issues on the front with five inch rims and he was comfortably getting three races out of a set of tires that he could push to four on the KA kart. Ray McKibben discussed a previous conversation that took place with Freber and a driver who said the tires were four or five tenths slower. Freber replied they are going to be slower; it's a harder tire, has less grip, lasts longer, and the result of that is it is going to be slower. He further stated it is slower for everybody because they are all on the same tire so it is relative. Jeremy Wheeler inquired about the heat cycles. Freber said it is interesting you all mentioned you don't like the way the R60B heat cycles because typically that is opposite of the input they get; most people really do like the way the tire heat cycles over multiple weekends; not just over multiple heat cycles in one day but over multiple weekends. He stated it's a little surprising to hear that and it's really the first group he has heard this from. Freber said he needs to get a better understanding of what is going on there. Wheeler reported on his daughter's kart after three events they are a secondand-a-half slower. He added the tire still looks perfect, there is plenty of tread left, they are not blistered but they won't grip. Freber asked if they ever have grip. Wheeler replied on a brand new set they are fast; three events in they are a second and a half off; there is nothing he can change on the kart to make it faster and his daughter just says it slides. Schroeder reported they would run one race with a new set of tires, within a few days go back to the track and use those tires for practice. They would see a lot of time where they dropped off. His son would swap out those tires with another set of Hoosiers and he would gain three-fourths to one-and-a-half seconds immediately. Schroeder said the tires looked good and only thing he could put any conclusion to was, let's say it is an 85 to 90 degree day, they race on that tire and once they get up to temperature it was kind of over for that tire. Don Boles asked what the tire temperature was to which Schroeder said he did not know. Schroeder explained they started racing in June and it felt like they were going through tires more quickly than normal and in order to stay up front, without seeing a second drop off, they would put a new set on. He said his plan all along was to run a tire for a few races then turn them into practice tires and keep that rotation going. He explained the most laps he would see on a set of tires was anywhere from 200 to 300 for both race and practice and it seemed if the air temperature was in the 80's or 90's, that is when they would wear off very fast. Late in the season in the fall they could get two, three, or four races out of the tires and it just seemed that is a better tire for the cooler temperature. Schroeder said he wanted to reach out and hear from Keith what he felt and his suggestions. Freber replied one other thing to mention that we haven't talked about is that the Hoosier tire is considerably shorter than the Bridgestone front so that's one other adjustment. If all of a sudden the kart was pushy, that is one other adjustment you would probably want to consider. If you were going right from the Bridgestone

to the Hoosier, you may want to consider lowering the spindles in the chassis to compensate for the difference in height of the tire; that would affect the balance and again, back to the wheel width, five inch wide wheel for sure and that seems to be born out by what Schroeder is telling him and his experience. Freber added you definitely want to consider the roll out difference on the front when you look at your setup. Wyke asked Schroeder if he was running 450s front and rear. Schroeder responded yes sir and said he was seeing basically equal wear on all of them. He reported there were other sportsman and senior drivers experiencing tire wear. Wyke asked if he took a close look at the sportsmen who were running 30s. Schroeder replied that is a good guestion and explained it was about the Champ Race when he just started figuring out it might be the narrow wheels; he stumbled upon it in Rainer's pits on two karts as they walked around and can't say for sure if any other sportsmen were running the narrower wheels and having a problem. Chris Kutscher reported he and his brother were on OTK wheels, 130 fronts and he still chunked the front tires. Freber asked what chunking the front tires means. Chris Kutscher explained it means pieces of rubber not connected to the tire carcass, almost like you would expect from a tread depth hole only wider and a bigger patch out of it while the rest of the tire is not affected in that manner so the rubber is separating from the carcass. Ted Cradlebaugh asked if that was the right front. Chris Kutscher responded they thought some of that was because of their turn one, he didn't have it on rear tires and his brother had it on fronts and their first turn had some pavement issues that caused that. He reported he does track heat cycles; a heat cycle to him is anything from a five minute qualifying to a twelve lap race. He explained he would get nine to twelve heat cycles of competitiveness out of tires and after that twelve. it was a major gamble if it was going to be competitive or not. Chris Kutscher further stated where people talk about our structure of two to three race weekends, depending if they are running the same tires for warmup, qualifying, races; they could have upwards of five heat cycles in a day so two weekends would be ten heat cycles or if they ran different tires for warmups, they could only put three on a day, so maybe three weekends, nine to eleven heat cycles. Freber replied his expectation would be everybody there should get at least three race weekends out of a set. He added he really would have liked to have seen the issues with the tire chunking in real time and they could have addressed them at that point. He said first of all they are more than happy to send whatever compound we would like to test and evaluate; maybe we look at going to the R70 for the 2-cycle higher horsepower classes and working to refine the setups on the R60Bs for the lower horsepower classes. He said they are happy to supply whatever compound the club would prefer to race on. The other thing he would offer is it seems like it was related more to higher track temperatures and it is tough for him or anybody from Hoosier to be effective over Zoom. Freber proposed when it gets warmer, they would be happy to set up a test day at the track with himself or Adam to work with the club directly. He said he believes the product is better than what we are seeing. Josh Johnson said he thinks someone mentioned they were running twelve pounds of pressure and Freber seemed a little surprised by that. Johnson asked what Freber's tire recommendation would be for the Hoosier tire. Freber responded it depends if we are talking a KA kart, a 125, or a Briggs, and also the ambient track temp. If that was on a right rear or a KA or a TaG125 and it was on a ninety degree day, that's probably a little on the high side. If it was on a Briggs in the spring or fall when the track was cooler, that was probably on the low side; it is all relative to the package that you're running and the ambient track conditions. Ray McKibben said he noticed earlier this year that Margay made a switch on their rims from Douglas spun and shifted to the Douglas magnesium rims with their Ignite Series and asked for Freber's insight why they made that shift and he knows it is not going to apply to all of the karts. Freber discussed difficulties in getting rims and explained the bottom line is you couldn't get the Douglas stuff anymore and they had to make a change as they literally had no other option. Boles said they are talking about heat cycles but nobody has come up with a temperature the tire is running at and so for hotter days there are things you do to make that tire run cooler. Freber replied absolutely; on a day where the ambient temp is hotter, obviously the track temp is going to be hotter, you're going to start with lower pressures and ideally you're going to start with nitrogen and you'll have a much flatter performance curve if you're running nitrogen; there are so many variables. Boles said it sounds to him like nobody is keeping track of tire temperatures to see what is going on and he thinks that is a big key. Freber replied it helps you dial the chassis and tire temps are really helpful but you do not want it to almost become gospel; you want to use it to dial the chassis in but you don't want to get yourself in a spot where you have to have a tire temp of 150 because there are so many variables. He explained if you can read your tire temperatures and adjust accordingly, it is a very effective way to dial a chassis in that not a lot of people use anymore. Freber reported when they were running high horsepower direct drive karts on soft tires, tire temps were the only thing they looked at; they didn't even talk to the driver, and then adjusted the chassis to get the curve across the tire they were looking for. He stated it is a very effective way to set up your chassis and very objective; the numbers are what the numbers are then you adjust accordingly then you get a new set of numbers; it gives you very good feedback and is something he finds very helpful. Boles reported he found when he overheated the tires, they went away. Freber explained there is a break-in procedure that he finds very helpful. If you put new tires on and you leave the pits and bury that KA kart into turn one as hard as you can drive it in there and proceed to drive the rest of that lap like it is the last lap of your life and blaze those things on the first lap out of the pits, they're not going to be real happy. If you leave the pits and you run a lap bringing them up to temperature slowly then blaze them for four, five, ten laps, or whatever then on your last lap before you come back in the pits, be kind to them again; back off, run an easy lap before you pull into the pits and let them cool entirely, he thinks you will find they are much more consistent over the life of the tire. Rainer Pansch reported he believes he lowered the front spindles halfway through the season and it seemed like the front tires liked having a little bit less camber on them compared to the Bridgestones that they ran so standing them up a little bit more helped them out quite a bit. Freber responded two little changes that are very simple to make and once you do that, you are kind of down the road and you don't think about it anymore. He further said he would agree with Pansch, the Hoosier tire does like a little more positive camber and part of that could be because it is a shorter tire and if you're not adjusting for that, that's kind of one way around it by throwing some positive in it; making the outside edge dig a little harder. Bruce Wyke reported on the 206 kart at the beginning of the season and said they were really leaning a lot of leverage on that right front. He said there were a lot of setup changes but it wasn't until they started taking grip out of the rear; he thinks that grip strip is crazy; it's like they hook the rear and just plow that right front and could destroy a tire in one race if they want to. He further stated he thinks that grip strip has got a lot to do with some of the problems they are having as a team with the right front. Wyke explained once they resolved that and started getting grip out of the back instead of just hooking it and pushing it through the corners, things got a lot better. Freber responded that's where it comes to setup; if you're overheating the right front, maybe it's because the rear is so locked down it's just plowing it and it's just smoking the right front through the lefthander at the end of the main straight. He suggested taking some grip out of the rear, free it up, and let the thing rotate a little better; that's going to make the tires a little bit happier again. Chris Kutscher reported another thing he noticed over the course of the season was when he was dismounting used tires and putting on new ones, it seemed as though his tires that were at the end of their competitive life, the sidewall had noticeably gone flimsier on the used ones and he wasn't sure if that was a normal phenomenon experienced with the Hoosiers; it's not something he experienced with the Bridgestones and maybe that was contributing to some of the performance loss; he's not sure. He said he also has the question of the different compounds we're considering, whether it be 60A, 60B, or 70, do they all use the same carcass in construction and just the compound is different or are they actually designed any different. Freber responded the actual construction is different and it depends on what two tires you're comparing. He explained there are some similarities in construction between certain tires and in other tires there's dramatic differences in construction and it changes from front to rear so it's kind of a mixed bag. He further stated its gets very confusing; there's not one straight answer to that; there is different construction and different compounds across the entire range. Freber explained the

R55, R60A share a compound but different construction so the compound is the same on those two tires but the construction is different and overall grip level is not solely dependent on compound; it is also very dependent on the type of construction. He said 55 has a little bit more grip overall because of the construction differences so that's an example. Chris Kutscher said that is kind of what he was getting at as well; if we are considering the 70 as potentially a longevity option, does it have a construction difference to what we see in the 60 as well that would help support that? Freber explained the 60B and the 70 are going to have very, very similar construction, virtually identical construction, but a much harder compound on the 70 so your longevity on the 70 really comes from the compound. He said the 70 is going to be slower but it should last significantly longer. Ray McKibben said he noticed one thing off the bat with the 60A and 60B, the weight of the tire itself is significantly heavier than the YLC that he was used to running and asked if that has any effect on the tuning. Freber responded he does not know that that particular difference has any more effect on anything than anything else and if it did, he does not know what it would be. He stated honestly, he thinks there is just more rubber on the tire which means it will maybe hold a little bit more heat which means maybe you want to start the pressures a little bit lower or run nitrogen if you can. McKibben noted it adds weight to the kart to which Freber said it shouldn't be any more than a pound-and-a-half he doesn't believe. Pansch stated that is the difference they experienced running nitrogen. Ted Cradlebaugh asked Chris Kutscher the last five races, how did his tires compare to the first seven. Kutscher replied he thought they were pretty similar; about ten heat cycles. Cradlebaugh explained we put a drastic change on turn one for this year and he does not know how much of that is going into our issue with the tires and he was hoping it would improve the last five races. Kutscher explained he thinks turn one contributed to the chunking issues we saw of taking big hits and damage to the rubber; he doesn't think it made a difference in the overall life that we were seeing out of the tires. He said it kind of answered Bruce's point as well, he kind of figured out in the second half of the year to drive around it in the best way possible to manage it. Ted Cradlebaugh responded that's the question really he wanted because we change our lines running into turn one and coming out. Boles asked Kutscher how much chassis change he did from the beginning of the season to the end of the season. Kutscher replied a lot; he tried axles, seats, castor, camber, tire pressure; he didn't change ride height either way; he did most of the major ones. He said he actually struggled at the end of the year with setup and felt like he was throwing the kitchen sink in the thing and couldn't get it to work right. Kutscher stated he thinks eventually they learned how to drive around turn one as a group and help minimize some of those issues. Wyke asked if Chris and Andy Kutscher are on a Tony to which Chris Kutscher replied yes. Freber asked if Chris Kutscher could send him pictures of the tires with the chunks coming out and said it would be really helpful for him. Chris Kutscher said he still has some of them and he tried to capture markings on the side of the tire too. Jeremy Wheeler said he has a couple of those pictures as well. Freber said he wished he would have known about it in the middle of season. Boles asked if it was chucking of the tire or picking up rubber from the track. Chris Kutscher replied he would call it chunking similar to what he has seen on extreme road race cars. Wheeler reported his was peeling rubber out of the inside of the tire on the front of his daughter's kart and the rear of his. Andrew Patterson reported from the first OVKA night race to the end of season, the only thing they tuned their kart with was tire pressure throughout the season. Ted Cradlebaugh asked how low Patterson went in terms of pressure to which Patterson replied no lower than probably thirteen. He explained he tested the R70 tires he thinks at race eleven, somewhere at the end of the season, and overall in terms of the feel of the tire, it felt much stiffer and much more slidey as you would expect of a harder tire and it legitimately did not feel as racey as the 60s and he has driven the 60As and 60Bs. He said everything slowed down, you can't go in as fast, you can't carry corner speed near as much, your exit has to be much smoother laying down power because the kart will just slide, and they take much longer to come up to temperature than the 60s. Patterson said overall he personally was not a huge fan of the tire; for him in terms of getting the tire up and moving and getting racing, you spend way too many laps waiting for it to come up to temperature especially in the cooler

temperatures like a night race; they just take a really long time to come up to temp and when they do come up to temp, they just don't deliver half as much grip as the 60s. Josh Johnson asked how the tire wear was to which Patterson replied almost unnoticeable. Chris Kutscher asked how the 70s compared to the MG Reds. Patterson explained in terms of the feeling right out the gate when you pull out of the pits to the first three laps of the race, they feel fairly similar in terms of just not delivering a huge amount of grip but it almost feels like the MG Reds would kind of pick up some temperature heat out of the tire, not really compound like the stiffness of the tire, just pure temperature in the tire that would deliver grip and he did not really feel that out of the 70s but then again he also ran the 70s on day it was probably 50 degrees and he has driven the Reds on anything from 95 degrees to 30 degrees. Wyke asked if the tires were the SH. Patterson replied yes, the super hard. Boles stated in the past the club has changed tires at least four times that he can remember; every time we have done this we have had problems, not quite to this extreme, until we could learn how to run the tires. Patterson stated from his perspective and experience from running the 60Bs, he thinks the majority of the problem is the sticky in turn one or whatever we're calling it. the grip. He said he thinks you just can't run that line because when you go into the corner and then you do your left hand turn to get the kart rotated, it's just bites on that tire so hard, all that grip and it is just chunking it up so bad. Patterson further stated going back to what Wyke was saying about how they could kind of fix that by taking some grip out of the rear; that might work in a 206 but in a higher horsepower kart, you need that grip to get it around the rest of the track so it's giving up time to save the tires and that's when money comes into it in sets of tires. Freber said they would be happy to work with us and get us some test tires, R70, R60A, whatever you want, and set up a day where they come over and work with everybody fine tuning their setups and trying to help get it dialed in a little more; tell them how they can help and they will be happy to do it. Banfield said he really appreciates Freber taking the time to jump on and have this conversation. He stated we have a board meeting tomorrow night and he highly encourages everyone to jump on there. Banfield said we have got to make some decisions in the short term on the tire compound; we have the prizes and awards coming up on January 16th. Freber said if we made a change after that, they are happy to swap out tires for us. Banfield replied that's great and he appreciates that. Rick Coombs asked what his final date is for getting tires for the banquet. Freber asked when the banquet is to which Coombs replied January 16th. Coombs noted we have a meeting tomorrow and he has not ordered tires yet. Freber asked Coombs to give him a call on Wednesday morning and said they will make it work. Freber further stated if the board is undecided, they will work with that and swap tires. Schroeder thanked Freber for taking his time tonight, for listening to us, and for doing everything he is doing to help all of us out. Freber responded that's what they are here for and to just tell them how they can help and they are happy to do it. He said they love what OVKA does and love what OVKA means to karting; he says that all the time and he truly means it. Freber further stated it's clubs like OVKA that allow karting to continue over the years and prosper and they want to do anything they can to see OVKA continue to be a strong club. Freber said he will wait to hear back from Aaron or Rick.

Meeting was adjourned at 7:39 p.m.

BOARD MEMBERS PRESENT: A. Banfield, D. Boles, R. Coombs, T. Cradlebaugh, S. Golladay, J. Johnson, J. Holliday, R. McKibben, and B. Schroeder.

MEMBERS / VISITORS PRESENT: L. Coombs, D. Cradlebaugh, K. Freber, A. Kutscher, C. Kutscher, R. Neuzel, G. Osterholt, R. Pansch, A. Patterson, C. Pettit, K. Schanie, and J. Wheeler.

Respectfully submitted by Lynda Coombs, OVKA Secretary, 1/27/2021.