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**Editor: Tony Condon**

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**Matt Gonitzke's SH-1 ready to fly April 25<sup>th</sup>**

# KSA CALENDAR

May 1<sup>st</sup>-3<sup>rd</sup> - CAP Encampment at Sunflower  
May 9<sup>th</sup> - Cookout at Sunflower  
May 18<sup>th</sup>-23<sup>rd</sup> - Region 7 - Albert Lea, MN  
June 12<sup>th</sup> - 15<sup>th</sup> - XC Camp - Sunflower  
June 13<sup>th</sup> - Cookout at Sunflower  
June 15<sup>th</sup> - 19<sup>th</sup> - Women's Soaring Seminar - Minden, NV  
June 22<sup>nd</sup> - 25<sup>th</sup> - Women's Air Race Classic  
June 24<sup>th</sup> - July 3<sup>rd</sup> - Sports Class Nationals - Waynesville, OH  
June 24<sup>th</sup> - July 3<sup>rd</sup> - 18 Meter, Open, and Club Class Nationals - Hobbs, NM  
July 4<sup>th</sup> - Kansas Kowbell Klassic  
July 2<sup>nd</sup> - July 9<sup>th</sup> - 1-26 Championships - Minden, NV  
July 11<sup>th</sup> - Cookout at Sunflower  
August 1<sup>st</sup> - 15<sup>th</sup> - 1<sup>st</sup> 13.5 Meter World Championships - Pociunai, Kaunas, Lithuania  
August 3<sup>rd</sup>-7<sup>th</sup> - Region 10 South - Waller, TX  
August 7<sup>th</sup> - 10<sup>th</sup> - Ratings Camp - Sunflower  
August 8<sup>th</sup> - Cookout at Sunflower  
September 24<sup>th</sup>-27<sup>th</sup> - Great Plains Vintage Rally - Wichita Gliderport  
September 28<sup>th</sup>-30<sup>th</sup> - 2015 Fly Kansas Air Tour

## Notes from the President

Greetings KSA! The season has started off strong. Students are starting their training, some long XC flights have already been logged, and many first flights of the season have taken place or will soon. Sunflower has been a beehive of activity and that is great! There are still some holes in the schedule this summer so contact **Don Jones** to get signed up.

I've had several questions about the Cross Country Camp in June. The idea for this long weekend of flying is to provide opportunities for pilots to get coaching advancing their cross country skills, whether that means working towards a Bronze Badge or Diamond Distance. My vision is to have morning briefings covering the weather, with suggested tasks for each badge level for the day, a short talk on some topic related to flying XC, and the opportunity for some two seat dual XC in the Grob. If you're interested in participating, please email me at [abcondon@gmail.com](mailto:abcondon@gmail.com).

I had a great time at the Pan Americans, with the highlight being winning the final day. The weather proved a challenge but we made it a contest and I came home with a 9<sup>th</sup> place finish, landing out three of the four contest days. I wrote up an article about the day that I finished. I hope you enjoy, and make sure to send me reports of your flights and notes for the Sunflower Seeds. Thanks!

**Tony**

# A Tale of Two Deviations

By Tony Condon

Day 3 at the Pan American Championships offered an interesting case study in the value of deviating for lift. I made a couple of pretty big deviations and at the time was of course wondering if they would be worth it. Compared to the pilots that were around me at the time it did seem to pay off.

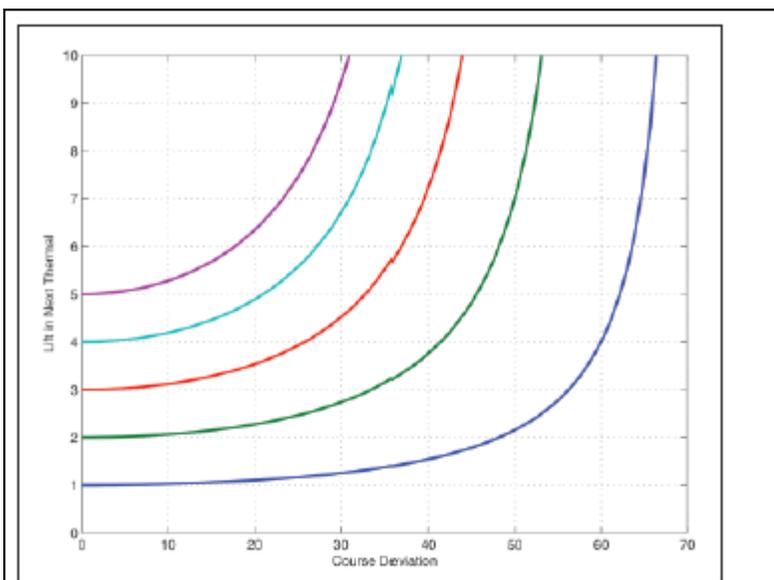
In December 2011, John Cochrane had a very interesting article in *Soaring* about the value of deviating for lift. I encourage you to re-read it or look it up on the online archive at [www.ssa.org](http://www.ssa.org). I will excerpt a few graphs and comments from his article here.

I wanted to take a look at my flight compared to the theory and perform a sort of post-mortem on my decisions. For a little reference, the next day at the contest it was raining so we had a group review of traces. I was scolded a bit by those more experienced than me for taking such a big deviation, even though the traces showed that my flying off course resulted in gaining on the competition around me.

The task was a racing task with 6 turnpoints and a total distance of 153.9 km, so none of the legs were terribly long. The task is shown on the next page. The red line shows where the general edge of the cumulus field was at while I was on task. The leg from Ferguson to Cars featured a pretty nice cloud street.

My first deviation was after reaching the Cars turnpoint. Leaving Cars, I diverted back for the good looking clouds. My path on this leg is also shown on the next page. The course from Cars to Cornassel is  $55^\circ$ , my diversion was on a course of  $14^\circ$ , a deviation of  $41^\circ$  left of course. My reward for the deviation was a climb of 3.7 knots and an average Netto for the leg of .6 knots.

According to Cochranes, charts, my deviation would be worth it only if the lift on course would've been about 2 knots. So...now to determine what I missed by deviating.



*Figure 4. is it worth going off course to find a better thermal? For each MacCready value, the line indicates how much better thermal off course makes a course deviation worthwhile.*

The plot carries a number of lessons:

*Small deviations are nearly costless.* The lines each start on the left at the thermal the pilot will find straight ahead, but they start moving horizontally to the right. It's worth making small – 10-20 degree course deviations for even very slightly better thermals.

*Make smaller deviations in stronger weather.* If you can find a 5-knot thermal straight ahead, you need to know there is a 10-knot thermal to make a 30 degree course correction worthwhile! Bill is right at Ephrata, where thermals were strong but isolated.

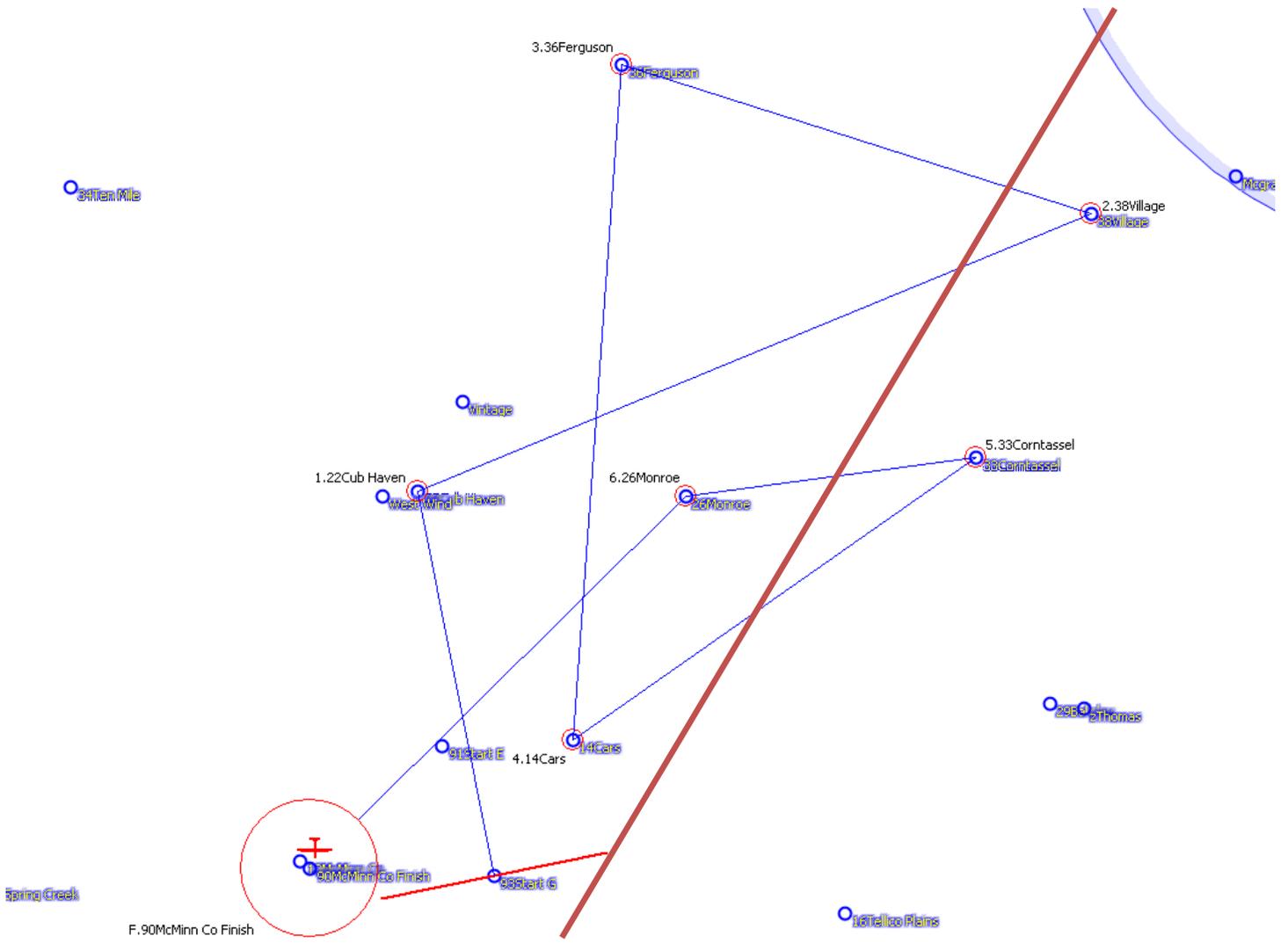
*Make big course deviations in weaker weather.* Herb is right in Chicago. Here it is typical to find two knots straight ahead, but 3-4 knots if you go chasing clouds. That means up to 30-40 degree course deviations are ok.

*Make big course deviations in very weak weather.* If you're going to end up climbing at 1 knot, it's worth really going anywhere to avoid that fate. Even 50 degrees off course for a 2 knot thermal is justifiable.

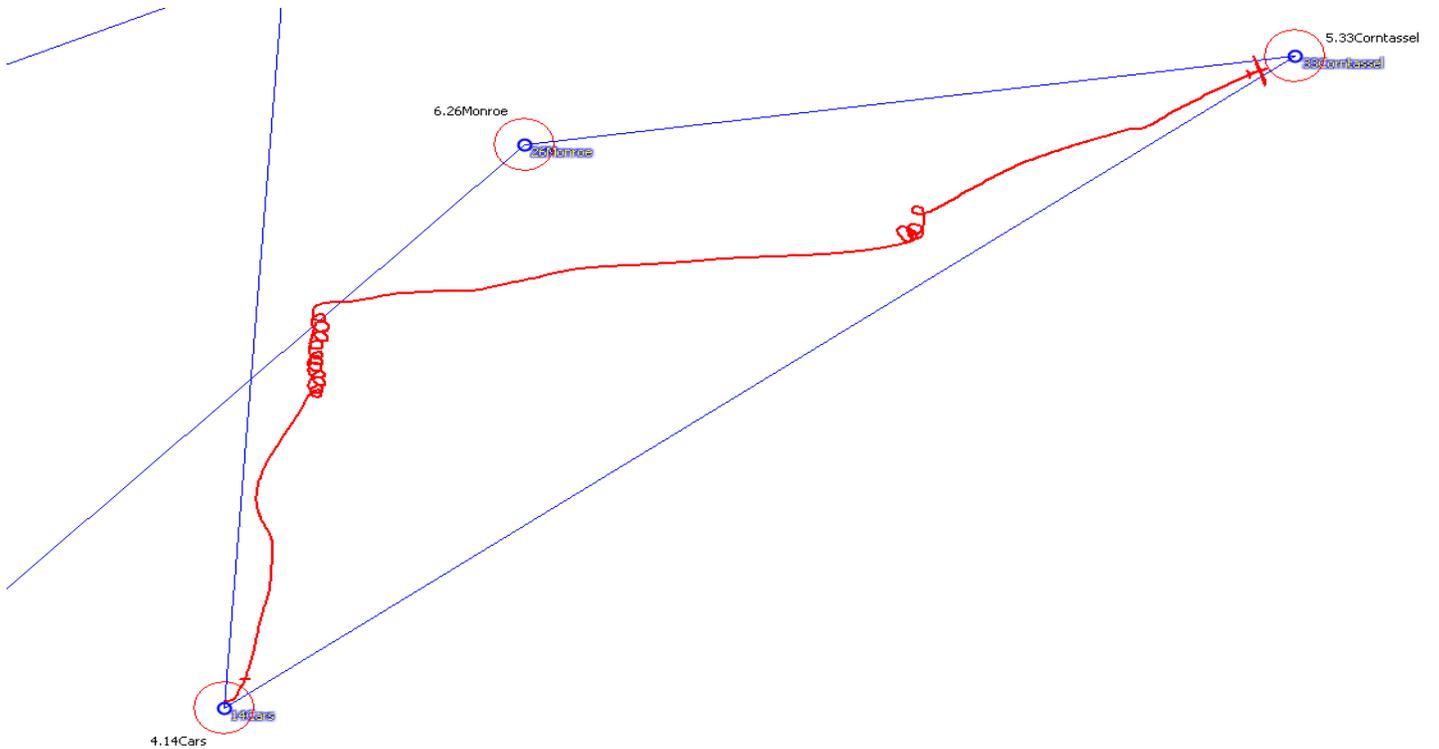
This is part of the general point: *Avoid weak lift.* It's much better to climb at 3 knots always than to have half your thermals at 1 knot, and half your thermals at 5 knots. Minutes per foot matter, not feet per minute.

*Don't go past the wall.* Each line explodes vertically off the chart at some point. If you fly sufficiently far off course, you go slower than flying straight and taking a 2-knot thermal, even if you can find an infinitely strong thermal off course.

Excerpt from Cochrane's Dec. 2011 *Soaring* article



Task above. Best clouds west of the Red Line. First Deviation below



The pilots who flew the leg “on course” were HA, JA, JS, RF, and PG. Their average climb rate was 2.4 knots, with extremes being JA at .7 and RF at 3.6. They also averaged a netto of .2 knots, mostly due to HA managing a .7 knot netto.

Neither my climb rate in that thermal or my netto alone (see graph to the right) is quite enough to justify the large deviation, but I think the combination is what made the leg work for me. During the flight I decided the deviation was worth it based on my performance relative to HA. We had been wing to wing on the previous leg. He stopped for a 3.5 knot climb and then made a sharp diversion for only a brief climb at 1.2 knots before Cars. About 3/4 the way down the subject leg, he took 2.1 knot climb, in which I joined him briefly, after my diversion, about 400 feet higher. My feeling after the fact is that my diversion helped me gain on HA, but a large part of that was due to his diversion before the turnpoint, and at best kept me even with the rest of the competitors.

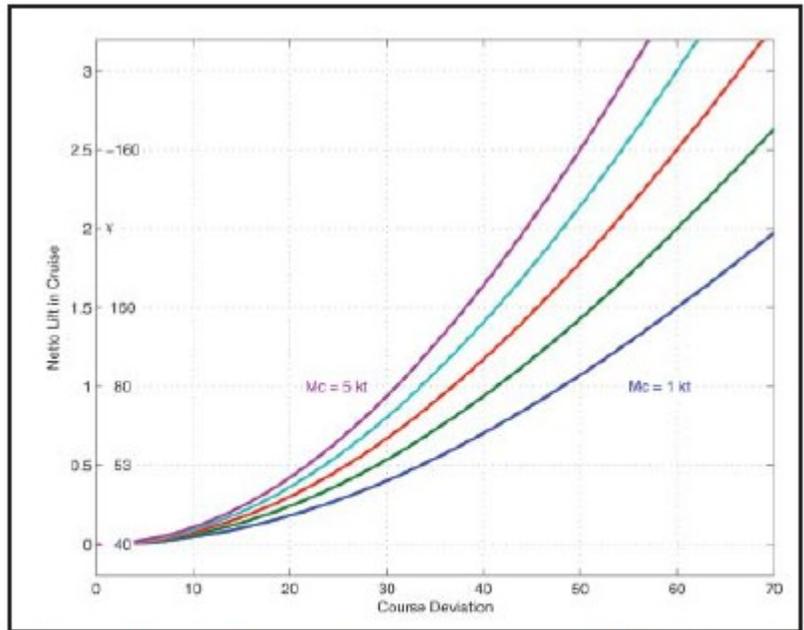
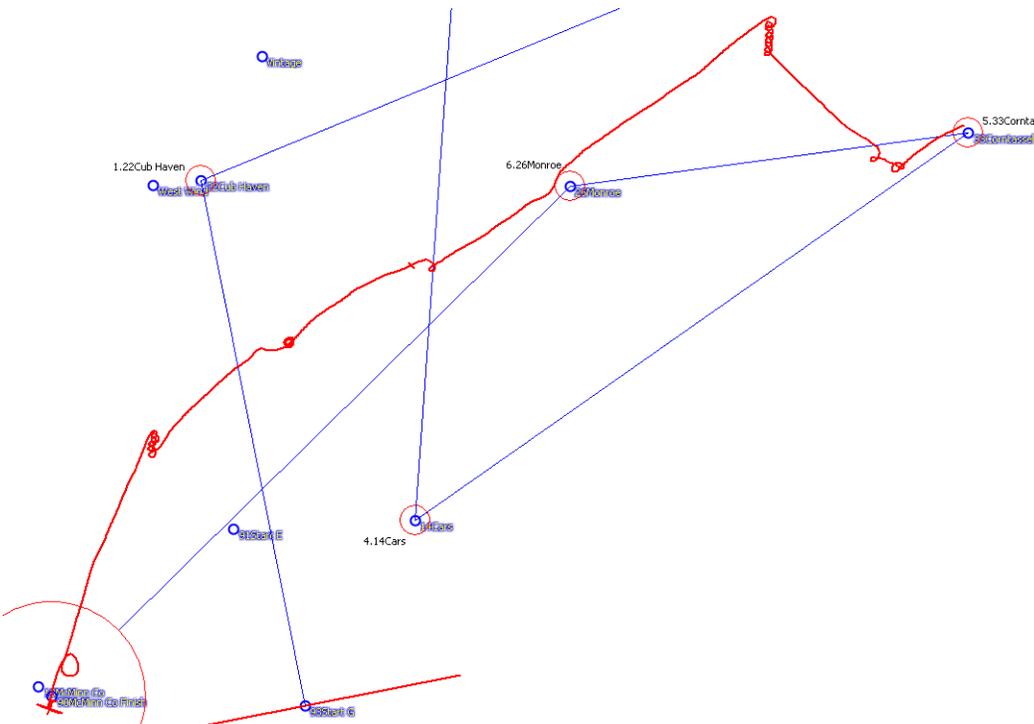


Figure 5. How far off course should you go to cruise in lift? The left vertical axis measures netto lift experienced in the off-course glide. The right hand vertical axis measures the achieved L/D in the off-course glide.

Now, Diversion #2! After turning at Corn tassel, we headed for Monroe. I saw a thermal being marked by BC and headed off course once again. BC was actually still on his way to Corn tassel, taking a very large diversion to do so. On my way off course, I wondered if this was going to put me further ahead of HA or allow him to catch back up. Only one way to find out!



Final two legs with my second big deviation

The course to Monroe was 262°, my deviation was on a course of 291°, a deviation of 29° right of course. My reward was a really nice 4.4 knot climb. As long as the on course fliers average less than 3 knots, the deviation should be worth it. Because this leg was very short and some pilots didn't climb on it, I found the average for the last two legs which was 2.2 knots. This deviation was very helpful for me on the last leg, and led to a 4<sup>th</sup> place finish for the day.

## Sunflower Seeds

April 18<sup>th</sup>: **Matt Gonitzke** reports: Saturday, **Keith Smith** and I arrived early to put some parts in the tailwheel spring on the 2-33. Then, **Brian Bird**, **KC Alexander**, and **Mike Groszek** showed up, and **Brian** and **Keith** did **Keith's** biennial, with **KC** flying the towplane and myself and **Mike** running the line. After a few tows, **Mike** did one flight with **Brian**, then new member **Scott Christ** showed up and got 3 flights with **Brian**. Also seen were **Dennis Brown**, **Don Jones**, **Mike Logback**, and **Steve Leonard**. **Steve** looks to be making good progress on his hangar. At this point, the wind was picking up and storms starting to become more numerous, so we decided to call it a day and get things safely back in the hangars.



Tim Double and Tony on April 25<sup>th</sup>

April 20<sup>th</sup>: **Bob Holliday** flew 397 km in the ASH-31. Wow!

April 21<sup>st</sup>: **Bob Holliday** self launched again for a 279 km flight.

April 25<sup>th</sup>: **Bob Hinson** towed. **David Anderson** and **Aaron Mauer** ran the line. **Tony Condon** instructed in the 2-33 with **Brian Silcott**, **Tim Double**, and **David Kennedy**. **Bob Holliday** self launched in the ASH-31 and **Matt Gonitzke** (6M), **Don Jones** (MB), **Mike Orindgreff** (CAT), **Jeff Beam** (F1), **Dennis Brown** (LY) and **Keith Smith** (LW) all flew. Good lift but a few cycles kept everyone local. **Steve Leonard** worked on his hangar. **Bob Park** was also seen as well as **Harry Clayton** and **Sue Erlenwein** who worked on the 2-22.

April 29<sup>th</sup>: **Mike Orindgreff** (CAT), **Keith Smith** (LW), **Tony Condon** (K), and **Bob Holliday** all flew, with **Bob** also towing. **Tony** landed at Smith Field near Macksville on the way west. **Keith** made it to Rush County and Smith before landing at Roberts Field near Silvia. Both Aerotowed home. **Mike** logged 175 km and **Bob** right at 400. **KC Alexander** was at the field as well as **Dennis Brown** and **Harry Clayton** and **Sue Erlenwein** were working on the 2-22.



Cirrus, 182, and Air Tractor 802 at Smith Field in Macksville, April 29<sup>th</sup>

April 30<sup>th</sup>: **Tony Condon**, **Bob Hinson**, **Don Jones**, and **KC Alexander** assembled the KSA Grob. **Harry** and **Sue** were once again hard at work on finishing up the 2-22.

## Member Accomplishments

**David Kennedy** was re-endorsed for solo  
**Michael Groszek** earned his Airplane Single Engine Land certificate. Congratulations!

# PAGC Photo Album



Day 1 Landout - 11<sup>th</sup> for the day



Day 2 Landout with JS from Canada - 2<sup>nd</sup> for the day



Day 3 Finished - 4<sup>th</sup> for the day



Day 4 Landout - Rainshower in background blocked the way to the airport. We just made it out of the field before the downpour started.



Celebrated my 30<sup>th</sup> birthday at a contest supper



Day 4 Winner



My crew, Matt Michael, and I on the grid

## KSA Duty Schedule

Sat, May 9, 15 Cookout	Bob Hinson 316-841-5561	Paul Sodaman 785-456-5654 Dana Duckworth 316-722-2078	
Sun, May 10, 15	Bob Holliday 316-641-6718	David Kennedy 316-841-2912 Dana Duckworth 316-722-2078	Tony Condon 515-291-0089
Sat, May 16, 15	Bob Holliday 316-641-6718	David Wilkus 316-788-0932 Kevin Ganoung 785-536-4540	
Sun, May 17, 15	Mike Logback 620-241-8486	Don Jones 620-960-6444 Mike Davis 316-772-8535	Rafael Soldan 706-255-9909
Sat, May 23, 15 Holiday	Bob Holliday 316-641-6718	David Anderson 913-231-4619 Mark Ross 316-214-1464	
Sun, May 24, 15 Holiday	Jerry Boone 620-662-5330	Matt Boone 620-662-3849 David Anderson 913-231-4619	
Mon, May 25, 15 Holiday	Bob Holliday 316-641-6718	David Kennedy 316-841-2912 David Anderson 913-231-4619	
Sat, May 30, 15	KC Alexander 316-308-8498	David Wilkus 316-788-0932 Mike Davis 316-772-8535	
Sun, May 31, 15	KC Alexander 316-308-8498	Keith Smith 785-643-6817 Mike Davis 316-772-8535	
Sat, Jun 6, 15	Mike Logback 620-241-8486	Paul Sodaman 785-456-5654	Rafael Soldan 706-255-9909
Sun, Jun 7, 15	Bob Hinson 316-841-5561	Mike Orindgreff 316-773-7154 Steve Leonard 316-729-0356	
Fri, Jun 12, 15 XC Camp	Tony Condon 515-291-0089		
Sat, Jun 13, 15 XC Camp/Cookout	Andrew Peters 316-393-2261	Kevin Ganoung 785-536-4540	
Sun, Jun 14, 15 XC Camp	Jack Seltman 316-636-4218	Mike Orindgreff 316-773-7154 David Kennedy 316-841-2912	Brian Bird 620-728-1341
Mon, Jun 15, 15 XC Camp	Tony Condon 515-291-0089		
Sat, Jun 20, 15	Bob Hinson 316-841-5561	Don Jones 620-960-6444 Mike Davis 316-772-8535	Andrew Peters 316-393-2261
Sun, Jun 21, 15	Jack Seltman 316-636-4218	John Peters 620-755-3161 Dana Duckworth 316-722-2078	
Sat, Jun 27, 15	Mark Schlegel 316-641-5093	Aaron Maurer 316-300-6741	
Sun, Jun 28, 15	Mark Schlegel 316-641-5093	Mike Davis 316-772-8535 Scott Dimick 316-461-8196	

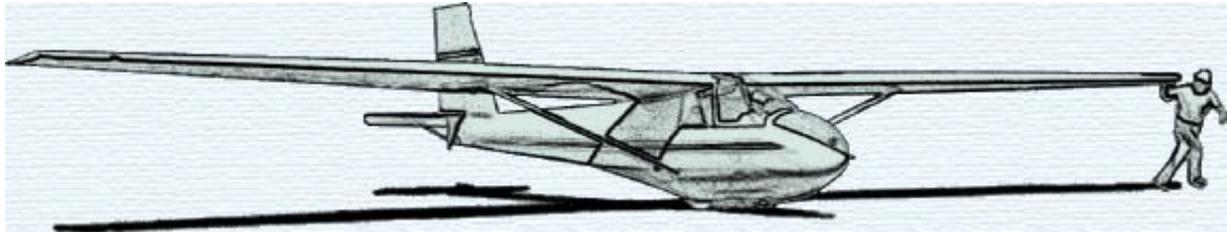
<p style="text-align: center;">KSA TOWCARD</p> <p>TOW NUMBER    START TACH TIME</p> <p>_____</p> <p>TOW PILOT _____</p>	<p style="text-align: center;">KSA TOWCARD</p> <p>TOW NUMBER    START TACH TIME</p> <p>_____</p> <p>TOW PILOT _____</p>
<p>PILOT _____</p> <p>ADDRESS _____</p> <p>_____</p> <p>SAILPLANE _____</p> <p>TOW HEIGHT _____</p> <p>TOW SPEED (MPH) _____</p> <p>DATE _____</p>	<p>PILOT _____</p> <p>ADDRESS _____</p> <p>_____</p> <p>SAILPLANE _____</p> <p>TOW HEIGHT _____</p> <p>TOW SPEED (MPH) _____</p> <p>DATE _____</p>
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KSA VARIOMETER

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Wichita, KS 67203

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**KSA Meeting**  
**May 9<sup>th</sup>, 2015**  
**Cookout at Sunflower**