

## **APBA National Meeting Safety/Products Meeting, January 24, 2020, Hilton, SeaTac**

### Minutes

The session was opened at 8:00 am. The agenda and a Pdf of the PowerPoint that was shown is attached to these minutes. A sign-up list was circulated for those who wished to receive copies of the PowerPoint.

#### 1) Introduction

The purpose of the meeting was to discuss safety equipment for both restrained and unrestrained drivers, compare and contrast as necessary, and provide general information.

BW updated the group on the previous two days of activities related to safety. Chris Fairchild had asked for two rule proposals be written for the GSR, one regarding reducing the point on the typical hydro turning fin and one to no permit anyone but the driver riding on/in the boat (Victory lap situation). Time was spent in Offshore discussing the recent blow over accidents, damage external and internal to the cockpits, and working on a path forward. There are a number of these boats that analysis may show could use some reinforcement and better personal safety equipment. Coordination external and internal to the APBA meeting was also accomplished through Katelyn Shaw, Al Thompson, Tom Stanley regarding Inboard cockpit testing and analysis.

- 2) LifeLine- No new products presently. LifeLine will not continue to build cut-resistant suits after the present material stock is depleted, estimated at about 12 more suits.
- 3) Security Race Products-Pat Gleason- It has been a period of transition in the past year as the top seamstress retired, necessitating some work to be outsourced and some offerings to be suspended. As new suppliers have been used, there appears to be one of such capability that some products could return such as the torso suits, the lay down hydro life jackets, cut-resistant suits in colors in addition to orange. The Supreme Corp., maker of the Tuff n Lite fabric still remains not interested in supplying the smaller amounts of fabric that would be used by Security and also requires such a large volume of socks that it is cost prohibitive to supply the cut-resistant socks to APBA. The material used in the cut-resistant suits is currently Kevlar-Steel and the company rates one layer at cut resistance level 4. With two layers in the suit the capability approaches a Level 8. Pat also introduce Scott LaPointe, one of the owners of SRP. A further note by BW was about a comment he had received regarding having samples of cut resistant suits on file at the APBA office similar to cockpit registration samples and possible use in the education of inspectors to be able to given them an understanding about what these fabrics look like.
- 4) Forward Head Restraints- BW- have been used in boat racing, mandated for three seasons, have reduced injury, and drivers/doctors have said that they know they

prevented serious injury or death. Use the low-profile design with quick releases. Adjustment videos are on You-Tube. Should be required to accomplish cockpit egress training with the FHR. If there is a rare difficulty with shoulder strap release or sense of interference, a quick 90-degree rotation of the torso and return should free any restraint.

- 5) Helmets-BW- The latest SNELL standard 2020 will come in two slightly different versions a 2020 D and a 2020 R. Helmets built to this standard will start to be available after October 1, 2020. The energy management of the 2020, the 2015 and even the 2010 standard is comparable, within a few g's, and with some variation in testing methods. After exploring the standards, it might be considered that the D be slightly more effective for flat impacts, similar to what could happen in a cockpit and the R possible more effective with a round blunt impact that can happen more likely with an unrestrained driver. These are slight differences and will be explored more deeply to see if there are some advantages in using different helmet types.  
The MIL-STD helmets are not permitted in APBA racing. Test data was shown and an energy management comparison graph shown also which showed quite a bit less capability for this helmet versus a SNELL, FIA standard. Helmet fit is still critical and if there is difficulty in getting a proper fit, contact BW for resources he has, such as excellent helmet fit personnel. There is a new FIM (International Motorcycle Federation) standard, but only about 30 % better than the ECE standard.
- 6) Restraint belts-BW- There should be 7-point belts in use. Going from 5 to 6-point reduces chest compression about 50% in an accident and reduces lateral hip movement about 30%. The 7<sup>th</sup> belt goes to the 5-point location and restricts the vertical movement. A new 7-point lever latch set of belts costs in the \$150-\$170 range, the rotary release, about \$100 more. A rule proposal for the GSR would extend the belt use life for boat racing to 4 years for polyester. Discussions with manufacturer's indicated it was easier to buy a whole new set than try to just add a strap or two to convert a 5 point to 7 point. There may be only another company making nylon in the country, nylon is not recommended due to the greater belt stretch with nylon.
- 7) Seat-BW- Best way to fit the body for our cockpits is with foam. Recommend using the foam kit from Bald Spot Sports, Indianapolis. If not able to do yourself, there are usually people in your neighborhood who have done it or have the guy(s) from BSP come to your boat and build you the first one which would include laser measuring of the interior and the finished seat, so that if you needed another, they could build another and send it to you. BSP has done extensive work with the spinal surgeon, Terry Trammel of IRL to determine foam thickness to protect the spine and dampen the shock to the body. The standard plastic or carbon seats that you see show cracks where they have failed to the loads from the body in crashes and do not support the spine well.
- 8) Rib protection-BW- Design 500 is a company building personal racing safety equipment and has an excellent set of rib protectors which can protect one of the parts of the body that can only take lighter loads. These protectors are custom made from a template that

you use for sizing and commonly used in go-karts. Steve David used them when driving an Unlimited to get better side stability and protection.

- 9) Risk reduction-helmet bucketing-Bob Koschka- There have been at least 4 helmet bucketing accidents in APBA in the past season, two turned out to be pretty serious. Bob K. also showed the device he constructed for his racing son which fills the opening in the front of the full-face helmet and lifejacket, the opening that can scoop water. This was made by taking a go-kart neck collar and turning it 180 degrees, then trimming the foam to fit. Bob K. left the collar/filler with Pat Gleason (SRP) to take a look at. Attached pictures.
- Hit-Air-Bob K-A video was shown of the Japanese Hit-Air device being demonstrated by Bob K, in the IRL lab at Indianapolis. This inflatable device has been utilized in about 5 Inboard flat bottom accidents with satisfactory results. There have been additional Inboard driver purchases for unrestrained drivers and may be something that Vintage drivers would want to consider. Bob K. did the work with Dr. Terry Trammel and his only comment was about the number of “moving” parts and reliability.
  - Bob Koschka collar-Bob K - Bob K. also showed the device he constructed for his racing son which fills the opening in the front of the full-face helmet and lifejacket, the opening that can scoop water. This was made by taking a go-kart neck collar and turning it 180 degrees, then trimming the foam to fit. Bob K. left the collar/filler with Pat Gleason (SRP) to take a look at. Pictures attached. Other racers have tried them. Bob also relayed Terry’s comments that this device might not take the place of strap retention, however, it sure could be a step in the right direction. BW thanked Bob K for his years of work on the subject of neck protection for the un-restrained driver. He is a real asset to the APBA safety committee and boat racing in general.
- 10) Products on our wish-list-BW-
- An improved air system for restrained drivers. Although systems are produced and some models work pretty well, there are still a lot of issues to be refined.
  - Crash boxes added to the current fleet of tunnel boats. The crash box construction has been utilized in UIM racing in the bigger classes for about 14 years and along with the collapsible pickle fork have proven themselves to be great crash energy absorbers in T-bone type accidents. There is a new proposal to require crash boxes on new construction. RJ West has been putting them on his new boats since January 1, 2019.
  - A modular Offshore “Cockpit of the Future”. Builders are not able to support the developmental costs, but they do say that they would install a common design that satisfies the necessary structural and internal requirements. Tom Stanley and Bob Wartinger prepared a proposal to produce the prototype (2014) for the UAE. The business climate and boat organizations changed about that time and the proposal was not funded. Ocke Mannerfelt began work on a prototype in 2018, however, it is presently a suspended project. A question from the floor,

“Are there any plans for a common cockpit for the smaller boats such as the tunnels?” The short answer is “Not at this time”.

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11) The session was adjourned at 8:47 am