

PropShaft



Magazine of the New Zealand Model Power
Boat Association Incorporated

Issue 4 2004

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THE NEXT PROPSHAFT IS DUE TO BE PUBLISHED IN Nov 2004

We are now nearly through winter as the daylight hours start to get longer and hopefully the temperatures get warmer.

Scale Hydro - Tokoroa

I attended the scale hydro meet in Tokoroa and had a really good fun weekend with the exception of the trip home, but more about that in a minute.

The weekend started with a long drive on Friday night all on my lonesome for a change (Elvis piked out and he didn't supply a note from mother or a doctors certificate). I arrived at around 11:00pm and was greeted by Harry and Wong One, my room mates for the weekend. After a cup of tea and a chat about all sorts of things, Wong One decided that a nightcap was in order (12:01am), Harry wanted to go to bed but eventually agreed to a Woodstock so I had one as well. The discussion then started to heat up and covered topics like world economics, the oil crisis, business relationships, employment law and squish clearance, amongst other things. At about 1:00am Wong One (the instigator of this session) got up and went to bed but by now Harry was into it. Anyway the Woodstock's ran out at 2:00am and we finally got to hit the sack.

Saturday at the races was good fun with the usual banter and some good racing as well.

Saturday night and we all went to the Cosie club for dinner. Another great night of good fun discussion and debate with a few beers and Da Da, Tui and Snorkel having a long winded discussion about nothing that I can recall. We then watched the end of a winning Warriors game of league and Snorkel was spouting like usual when he came up with a classic, Wong One was renamed Grasshopper (from the Kung Fu TV programme) because of his looks. This really struck a cord with the rest of the group and he was formally renamed at the drivers meeting on Sunday morning.

Sunday racing continued and after a prize giving we all headed for home.

This was where the weekend turned sour, A while out of Tokoroa on the back road south I came across an accident, as I got closer I recognised Grasshoppers car but it was parked facing the wrong way, there were a couple of other cars parked up on the side of the road. Then I saw Harry standing on the road with a bit of blood on his face. I pulled in off the road and as I looked back I could see the driver's side of Grasshoppers car had been destroyed.

I went back to talk to Harry and Grasshopper who was trapped in the vehicle. Not long after LM arrived and we proceeded make Grasshopper as comfortable and warm as we could and at the same time we unloaded their equipment in my trailer and LM's car.

Some 2 hours later Grasshopper was removed from the car and flown to Rotorua with a broken arm and pretty beaten up. Harry was taken to Taupo hospital for a check up and then discharged. We managed to contact Grasshopper while we were in Taupo, we got an update on his condition and we were told that he would be there for a day or two so we headed home.

I have not commented on the racing, that is covered elsewhere, I wanted to share my view on why I enjoy the hobby.

There are a number of things that I have taken from this weekend:

Have fun while you can and make the most of the company and friendship that is on offer. Enjoy the boating as well but keep it in perspective.

As part of this hobby, we spend a lot of time on the road, we all need to take care. The morning before the trip north, Grasshopper purchased a cargo net to hold down his gear in the back of his station wagon. This net appeared to work really well as it contained all of the gear in the rear of the vehicle. If the net had not been in place I believe there would have been gear flying around like confetti inside the car and this could have caused even more personal injuries.

Mid Winters - Hamilton

I was unable to attend the mid winters this year as I had a date with a big hammer and a kitchen rebuilding exercise. Unfortunately for those that made the effort to attend, it sounds like the weather was the pits and this put paid to the Sunday's racing. Saturday wasn't much better weather wise but some racing did take place.

Making Boating Better

At the committee meeting in Toke we discussed the level of support we are getting for some of our events (or lack of it as the case may be). A lot of work goes into hosting a regatta and it is disappointing when the support isn't there.

Perhaps it is a sign of the times that people are busy and they have other commitments. We also have to add to the mix the loss of the Palmerston North venue and the additional travel that is required if you want to go boating.

Perhaps we need a change of events, something different to offer a new challenge to the old hands and perhaps a more even competition for the new comers.

I floated some ideas after the Nationals for some format changes but like usual, I have had very little comment.

At the end of the day if we don't get feedback, we can only carry on as best we can but feedback helps to improve things.

As far as something different is concerned, the next event is the Thunder Down Under which promises to be exactly that, different, and an event that I and a number of other people are looking forward too. I hope Snorkel and Tui get a good level of support for this event.

Finally

I am pleased to say that both Harry and Grasshopper have recovered well from the incident and I am sure that we will be able to include the exercise in our next discussion over a Woodstock or a beer.

I think that is more than enough for now, but programme in a great weekend with good company, good friends and some fun boating to boot.

It can't be all bad really.

Regards
Grant Binns (Doris)

Tokoroa Model Power Boat Club

Presents

The Labour Weekend

THUNDER DOWN UNDER

SPRINT FEST

And

The Challenge for the

Thunder Down Under Regional Shield

October 23th – 25th

Hosted at

Lake Moana-nui

Tokoroa

Welcome to all those that would like to come and compete at THUNDER DOWN UNDER sprint fest. Due to some great input from competitors from last years event, this year we have added another event for those who would like to race there multi hull boats as they do at the world championships.

Entries are open to NZMPBA members and non members (non members must be current financial members of a registered model boating club that has its own insurance coverage for its members) the regatta will be run to NZMPBA rules and format as follows.

Sprint racing for all classes of boats e.g.: Mono, Tunnel and Hydro and engine classes for each of the three hull types A,B,C1,C2,P1 and P2. Races will be 4 heats of 6 laps for each class, and raced in the Oval matrix format (usual 2 ½ minute count down).

Mono class (world champ format) will be of 2 x 20 minute races

Mono class (world champs format): - an event held for multi boats raced in the world championship format ie. Left hand rectangular course and is a 20 minute race

Mono sprint class: - can be either mono or deepvee surface/sub surface drive type boats.

Tunnel class: - can be either formula one style or catamaran style hulls.

Hydro class: - can be either scale hulls or outrigger type hulls (accept in the scale class events where it's to be scale class boats ONLY!).

Open Class: - can be any hull type and engine size.

King of the Lake: - An event which will be held for each class of hull and any engine size from A size engines up to and including P2. (In other words petrol versus glow engines)

Entry Fee: - An entry fee of \$5.00 per event you enter (accept for the king of the lake event, this event is free) and a limit of \$15.00 per person who has entered 3 or more boats

Frequencies: - every competitor MUST have an alternate frequency and these frequencies must be written on the entry form in the section provided, remember entries without an alternate frequency will not be accepted NOACCEPTIONS!! And NO illegal frequencies will be allowed!!!. After entering by the due date you will receive a letter confirming your entry and given a time table, your frequency for the events you enter in will be marked on your timetable so please have your boats prefitted with the frequency you are listed with on the time table.

Thunder Down Under Regional Shield

This is a completely new trophy that has been included at this regatta for the first time.

It's a challenge between regions in New Zealand to battle it out to earn the rite to call themselves the regional champions for that year. Then return the next year to defend that title, and if that region doesn't have a representative or representatives to defend the shield, then it will have to be returned to have it place back on the table to be then challenged for again!

Regions: - Auckland, Waikato, Manuwatu, Wellington, New Plymouth, B.O.P, Marlborough etc.

Points scoring: - Points will be awarded to every region from the efforts of each competitor that race in the Thunder Down Under sprint fest!

I.e.: the more races you compete in, the more points you get for your region. Points will still be awarded for those that received DNF's, so obviously the better you do in the classes you race in, the more points you will get awarded for your region.

Regional Teams: - there is no limit as to how many competitors are in a team so therefore it's in the best interests for a region to get as many people they can to compete at the Thunder Down Under sprint fest.

Region Captain: - Each region will need to elect its own captain and inform the contest director who this person is on the first day of the regatta.

After Function Dinner

Seeing that the regatta will be held over a period of three days, an after function will be organized. On the Saturday night it will be a dinner held at the Tokoroa Cosmopolitan Club and on the Sunday night it will be a BBQ held at Scott Pickering's place in Tokoroa

Competitors and partners are all welcome!!!

Accommodation

Here is a list of motels in Tokoroa that you can contact to book yourself a room if you need one.

Amisfield Motel 22 Lochmaben Rd 07 886-7773

Clifton Court Motel Main highway Tokoroa 07 886-4579

Mayfair Hotel 5 Logan Street Tokoroa 07 886-7399

Redwood Lodge Motel State Highway 1 Tokoroa 07 886-8209

ENTRIES CLOSE 11th OCTOBER 2003

Diamond Cup Hydrofest.

Tokoroa, 3rd & 4th July 2004.

Firstly I must start with an apology, which is that I am guilty of leaving writing this report far too long after the event and now I am struggling to remember the way things went.

I should say at this point that generally at these events I do ask that some one volunteer to take on preparing the report for Propshaft, I always provide the results to go with this of course but I simply this time round have been over committed with other things creating the above situation.

I am sure everyone likes to read these reports but I dare say that there might be some that would say that they are boring and all sound the same, the way to avoid this is to have a go at writing some thing yourself, if everyone had a go at this on average then the expectation of having to do a report would occur about once every three years.... Have a think about that next time I ask for a volunteer to do the regatta report.

Anyway, all gripes aside.....

The entry level was a little low but the quality of competition made up for this. We saw some blistering times set in the 1 lap sprints of both the Sport 45 and C Scale hydro classes.

The hydro matrix racing was a little disjointed with the original entrants dropping out and other substitutes being called in to keep things viable... some interesting results occurring.

The offshore event was a lot of fun to watch and to drive in I'm sure, the course that was set out absolutely maximised the space we had available and certainly put everyone to the test.

A big thanks to Snorkel and the troops for putting on the event and certainly to those that stepped up to the plate to willingly help out with running events and lap counting etc.

Unfortunately the 4th round of the series scheduled for September in Blenheim had to be axed due to unforeseen reasons, so this leaves us with the final round late November and this is going to provide the platform for Palmerston North to re-

establish itself as a series venue, of course not having been usable since the terrible floods earlier in the year, it will be great to get back to that part of the country again. Lets all reward the Palmy guys efforts in rebuilding the venue with a really big turn out, after all you should all be hungry for action after quite a break and I'm sure the preparation of craft will be excellent.

I look forward to seeing you all there and probably at the Thunder Down Under in Tokoroa in the mean time.

Regs, TUI.

Diamond Cup regatta results.

3rd & 4th July 2004.

Lake Moananui. Tokoroa

B Hydro Matrix

1	T Rutledge	875.70 pts
2	N Plumpton	840.07
3	S Trott	454.06

C Hydro Matrix

1	M Miller	913.25 pts
2	T Rutledge	490.40
3	G Binns	338.72
rest dnf		

Best presented Offshore boat.

1	M Miller	Skulldugery
2	N Plumpton	Scarab
3	T Rutledge	Enduro

Offshore Enduro

1	J Belworthy	97 laps
2	N Plumpton	82
3	M Miller	62
4	N Wong	40
5	G Binns	29
6	T Rutledge	20
7	D Pickering	16

Offshore Hi Points series most laps after round 2

1	J Belworthy	201 laps
2	N Plumpton	186
3	M Miller	105
4	N Wong	90
5	G Binns	88
6	D Ward	39
7	S Shrimpton	32
8=	A Meek	25
8=	S Marsh	25
9	J Nicholls	23
10	G DePina	21
11=	T Rutledge	20
11=	R Anderson	20
13	D Pickering	16
14	D Christiansen	15
15	J Weake	13
16	W McNaught	10
17	G Clarkson	7

Sport 45 hydro.

Most Authentic boat judging

1	S Trott	Executone	570 pts
2	J Belworthy	Motaman	495
3	G Binns	Blackley Cont	475
4	M Lee	Oh boy Oberto	410

1 Lap Sprints.

1	J Belworthy	13.69 sec
2	S Trott	15.70
3	G Binns	15.77
4	M Lee	24.03

Heat Racing

1	J Belworthy	2000 pts
2	G Binns	1500
3	S Trott	900
4	M Lee	638

Trophy Final

1	J Belworthy
2	S Trott
3	M Lee
4	Rest dnf

Sport 45 Hydro Hi Points series after round 3.

J Belworthy	Motaman	7130
S Trott	Executone	5254
T Rutledge	The Breeze	4920 pts
M Lee	Oh Boy Oberto	4733
G Binns	Blackly Cont	3317
W McNaught	Fastpost	1105
J Nicholls	Ladybug	877
G Merrey	Full Tit	653

C Scale Hydro.

Most Authentic boat judging

1	T Rutledge	Ladybug	555 pts
3	M Miller	Miller Hi life	485
4	G Binns	Budweiser	385
5	M Lee	Oh Boy Oberto	380

1 Lap Sprints.

1	T Rutledge	13.89 sec
2	G Binns	14.53
3	M Miller	14.57
4	M Lee	14.89

Heat racing.

1	G Binns	1825
2	T Rutledge	1225
3	M Miller	825
4	M Lee	563

Trophy Final

1	T Rutledge
2	M Lee
3	G Binns
	Rest dnf

C Scale Hydro series after round 3.

T Rutledge	Ladybug	7618
M Miller	Miller Hi Life	5702
G Binns	Budweiser	4834
M Lee	Oh Boy Oberto	4128
S Trott	Executone	4072
D Christiansen	Bardahl	1040
T Wilson	Ultra Bold n Dash	240
J Nicholls	Pay n Pak	0

RADIO MARLBOROUGH CHALLENGE 2004

AT THE DIVERSION BLENHEIM

BY NITRO NED

This years running of the event was shaping up to be a beauty with 16 entries (the largest in a number of years) and the prospect of the ultimate record getting a further nudge upwards courtesy of Scott (snorkel) Pickering travelling all the way from Tokoroa with a CMB 67 shoehorned into his B hydro.

The week leading up to the weekend was the dead opposite with me snotted up with the flu and eventually having to take a couple of days off work as well. (Only the 3rd time in my working career I've done that with the flu). The weather forecast was also looking increasingly more dog, as we got closer to the weekend.

I went to work Friday as I felt good but by lunchtime wished I hadn't! A busy day as it was got home at 6.00 just as Wayne (Elvis) McNaught. And Darrell (Dazzle) Hansen arrived from the ferry. Shortly after Snorkel and Mel arrived closely followed by Trev and Daniel Steenhardt. My house was now full. The night spent talking boats N stuff and pondering the weather!

Saturday dawned fine but the predicted winds meant that the top end speeds we were hoping to realize would probably not happen as the water would never be perfectly flat. My health was still crap but I was not going to let that put a damper on the weekend. Boy what a relief when we arrived at the Diversion, near perfect water. I wasted no time in getting the speed course set up and after a quick drivers brief, got into speed as it is a necessary part of the R.M.Challenge. It was emphasised that those entered should complete runs ASAP to score points for the event.

Elvis broke the ice but conked at the top end of the course. Ross Homewood Chch and Dazzle got times for the RMC then Mike White Chch ran his K&B 3.5 tunnel thru and only did 1 run instead of the usual 2 each time. The speed worked out, and Woohoo, he had bettered John (Harry Potter) Belworthy's 1992 record of 59.950kmh by 2.5 k at 62.473 kmh. He now needed at least 60.911kmh to back it up!

Next Tony (LM) Rutledge did a run with his new Sport 45 for the RMC and bugger me Woohoo again first run 100.770 kph bettering Steve Trotts record buy heaps. Needing a backup of 98.251, then went and did 102.128kmh. As the first run was within the backup required he also had new record and good points for the RMC. In doing this he became the second member of an exclusive club, The NZMPBA "TRI-TONS". I.e. members who have officially run over 100kmh in 3 separate classes. I have been the sole member since 1997 and feel very privileged to be joined by probably our most experienced boater. Guess the next challenge is 4!

Mike changed props and had a go at backing up his record and his best was 60.125kmh or .786kmh short of his back up required. Bugger!
Darrin O'Malley and Gavin Jamieson did their challenge runs then Mike went again with the original record prop. Woohoo 61.224 and the record safe Whew!

Daniel, Snorkel and Elvis did Challenge times with the most significant being Snorkel, only 3kmh off C2 tunnel record. (Maybe another record is possible)!

Bill McDonald then did 2 runs with his C2 deep Vee for the challenge and bugger me if he did not add 1kmh to his existing record to a new mark of 81.540 kmh. The watches were outside the tolerances on the second run so like Mike would have to go again to get the necessary back-up of 79.5kmh.

Trev went next with his C2 Cat and had a fast run of 87.64 kmh which was just a bit quicker than Snorkel so now there was two looking at the C2 Tunnel record.

Try as they did they both could not improve on the above speeds. Several others made runs to qualify for the challenge then by 3.00 they had had enough and as the water was still reasonably smooth we decided to run the anticlockwise matrix. This event is the mono matrix course but you can race anything so long as it can turn left. It is normally dominated by tunnels and LM's Hydro, however it was Elvis and his Melon Head that showed the way from Dazzles B Mono with Malc Jamieson filling 3rd with his C2 tunnel.

SUNDAY.

The predicted southerly did not really materialise so the water remained boatable again.

Snorkel was keen to have a bash at the record so any time the water was flat enough he went for a test run but the water never settled flat enough to really turn on the top end speeds.

After the drivers briefing, the points were read out after day one and it was still fairly tight at the top so the result could go any way. With 16 competitors we needed 11 heats to get through the Challenge oval so got on with the racing.

It was consistency that would prove to be the winner with this event and again Mellon Head showed the way. Gavin Jamieson got second and Dazzle third. Who needs big grunty boats!

The final event was the 10x10 the top ten shoot out over 10 laps only 8 started and 7 finished.

A few brave souls did some speed runs after the racing but the water was too rough for all out speed again so we packed up and headed home for prize giving.

RADIO MARLBOROUGH CHALLENGE SCORE SHEET

NAME	PART 1	PART 2	PART 3	PART 4	TOTAL	PLACE
Elvis McNaught	840.47	614.91	798.30	750	3003.81	1 st
L.M.	1082.2 8	398.55	444.86	563	2488.69	2 nd
Darrin O'Malley	769.55	479.73	528.15	422	2199.43	3 rd
Malcolm Jamieson	915.95	546.95	400.94	317	2180.84	4 th
Gavin Jamieson	900.21	387.55	644.27	238	2170.03	5 th
Darrell Hansen	778.73	553.14	459.35		1791.22	6 th
Bill McDonald	1011.3 2	375.44	284.32	1000	1771.08	
Matt Gay	642.97	536.99	494.19		1674.15	
Snorkel	965.23	122.84	412.05		1500.12	
Ross Homewood	710.70	328.07	417.75		1456.52	
Mike White	968.69	282.93	185.04		1442.66	
Trev Steenhart	968.36				968.36	
Daniel Steenhart	725.93		182.97		908.9	
Jock McDonald	882.41				882.41	
John Rickerby	734.33	114.15			848.48	

CONGRATULATIONS

The following 3 members have recently broken NZMPBA records at recent regattas.

Mike White from Canterbury set a new 100 meter speed record of 62.473 kmh in A tunnel.

He used an owned designed boat running an inboard rear induction K&B 3.5cc engine on 10% nitro. The prop used was a Prather 215.

Tony (LM) Rutledge set a new 100 meter speed record of 102.128 kmh in Sport 45 hydro using an own designed and built hydroplane powered by an OS46 VRM engine He used standard 4:1 methanol Oil mix swinging an Octura 1755 prop.

Bill McDonald of Motueka increased his own C2 Deep Vee 100 meter speed record up to 81.540 kmh using a Predator Deep Vee. The engine a Picco 90 and running on 5:1 methanol oil mix. The prop was a Prop Shop 6017/3.

All 3 records were set at the Wairau diversion at Queens Birthday weekend.

Well done guys.

Nitro Ned. Records Officer.





Three boats from the Marlborough Challenge Weekend.

Mid Winters Endurance Weekend

There is something about thumbing your nose at the weather (the rain, wind, cold and large waves) and just getting out there and doing it that makes any outdoor hobby a bit special. Also being able to stay warm and dry while out in those conditions is an added bonus.

So it was that 10 hardy boaters gave the finger to the big black clouds and white cap waves on Hamilton Lake and took to the Mid Winter Endurance Champs with the enthusiasm of racing on a warm summers day – believe that? I hope so. Even John (I hate racing in the rain) Belworthy came home smiling after a win in B class. We won't talk about him spending the first 10 minutes or so hiding under a palm tree while a particularly heavy shower came through.

With the entries being very low this year the event was always going to be a bit of a logistical nightmare to stage. Thanks to some amazing co-operation and incredible pitching in by all who attended plus some fairly flexible thinking at times all problems were overcome and we had no significant delays during the day.

A enduro was first up and started out not too bad but demanding of the throttle on all except Warwick's boat which was able to use some extra power in the conditions and eventually won the race by 5 laps.

About half way through the race my gazebo got picked up by a gust of wind and suddenly looked more like a heap of scrap lite weight ali tube than anything recognisable. This left our lap scorer Kim at the mercy of the elements for the remainder of the race although Tony worked valiantly with an umbrella to keep the worst of the water off the score sheet while still allowing Kim to see the boats on the course.

Prior to the start of B Enduro, a huge squall came across the lake with big dollops of rain and wind to boot. The question was asked do we want to carry on and the answer was still yes – crazy buggers. Pieter brought his 4 wheel drive across the grass to stop Kim and the score sheets from getting any wetter and on we went. John still had to put the motor and radio into his boat but by the start of the race was nearly set. After a bit of time sheltering from the rain and getting things set up he went out and joined Rex in lapping to the best of their ability in very difficult conditions. Daryl was having problems with his usually reliable boat and it didn't take too much for him to call it quits. John and Rex tussled it out with both receiving the attentions of the rescue boat. At the end of the hour there was only two laps separating the boats.

Andrew Meek had by this time spent two hours in the rescue boat doing a great job and staying out in all sorts of crap weather. I think that he was starting to get seasick with the waves.

A stop for some hot snags for lunch was welcomed by all concerned and then we went on to the C1 race. This race had 4 deep vees and Wayne's mono. The deep vees certainly had a huge advantage and drove to the conditions and often beyond. Andrews boat was marred by some unreliability but when running well was up there with Darryl, Pieter & Rex. Wayne retired fairly early on having decided that the engine was worth more than the beating he was giving it in the waves leaving the deep vee demons to fight it out.

C2 was last up for the day and the wind decided to drop off for the start allowing some reasonable speed. The rain made up for it at times and the boats were often quite hard to see in the water spray. Greg had a fairly good run to win the event with only a few rescues. Andrew, driving his petrol offshore boat, was lapping consistently with the boat relishing the conditions but getting blown about by the wind a bit when it did come up. Probably the most restrained drive of the day was from Stanley with his 81 powered cat. He circulated around at very reduced throttle in conditions that would have had most cat drivers flipping and submarining. Tony K put in 44 very hard and spectacular laps with his 90 mono before the conditions won.

All in all a wet and windy day but a lot of fun nonetheless. We decided to call off the racing on Sunday due to the weather being no better the next morning. One guy was heard to mention, "One days boating in the rain is ok but two is miserable".

One positive aspect of the rainy day is that the toolboxes that have probably spent the last few years accumulating junk have all hopefully had a good clean out. I know that I removed about 2 kilos of surplus stuff from mine when I put everything back into it this morning.

Many thanks to the guys that made the effort to drive to Hamilton for the weekend. Our club appreciates your efforts to support the event. See you all in Palmy next year.

The Breeze – an easy to build Sport 45 Hydro, by Tony Rutledge.



This article describes the main design features of my new Sport 45 hydro and how it was constructed from foam & ply.

The name for this hull comes from the well-known Wellington Radio station "The Breeze" which is appropriate for a hull that is a breeze to scratch build and set up. The design concept was focused on simplicity and ease of construction using inexpensive materials to provide a low cost yet competitive option for the Sport 45 class. The hull also had to fit the rules and spirit of the Sport 45 class.

The end result was a strong lightweight hull with a pleasing shape that blends the front half of a modern pickle fork hydro with the narrower afterplane section of the older designs. With a Kiwi 3 cowl slightly modified, a turbine tube and tail fins the boat has a profile similar to a turbine hydro.

The hydro set a new Sport 45 speed record on the Wairau Diversion earlier this year and also set new heat racing records for B hydro and Open Oval at the Blenheim Nationals. The hydro is powered by an 8 year old stock standard OS46VRM running 4:1 fuel with no Nitro.

Hull Dimensions and Design.

The hull dimensions and basic design are similar to the old "Fast Post" hull. The most obvious difference is the narrower afterplane. The intention here was to reduce weight at the transom and reduce tunnel lift. Model hydro's tend to have too much tunnel lift and kite too easily and this hull is designed to expel air out the sides of the afterplane section.

The hull profile is quite thin to reduce frontal area drag and the sponsons are longer and wider than the Fast Post sponsons with very rounded gunwales and a smooth transition from sponson to afterplane.

The hull length to the transom is 950mm (37.5") and the tunnel width is 288mm. The sponsons are 372mm long with a ride surface width of 65mm. The sponson design was kept simple for ease of construction with a constant dihedral angle of 3 degrees and a single 45 degree non trip on the outside. The low deck camber makes it easy to sheet in 1.5mm ply. Sponson ride surface depth is 23mm.

The pickle fork depth is slightly less than the maximum allowable 25% of hull length and the drive dog is 34mm behind the transom with a transom mounted strut.

The shaft angle is 2 degree at the prop and the shaft has an aluminium ride plate RTV'd to it measuring 17mm wide x 200mm long.

The nose section, which comfortably accommodates the engine, radio boxes and fuel tank, is made to match a Kiwi 3 cowl, which is an acceptable semi scale shape for a Sport 45. The tuned pipe is enclosed in a turbine tube rolled from .005" aluminium shim (printers plate). This is simpler than a beneath the deck installation and allows easy adjustment of pipe length.

The finished weight of my boat (less fuel) was 3.9kg with the C of G 80mm behind the sponson transoms. This is with 6oz of lead located just in front of the radio box and 2oz of lead behind the left sponson.



Hull Construction.

The ply over foam construction is strong, light easy and cheap.

The sponson and centre section foam cores are set out separately using hot wire technique. The sponson inner sides are cut from 3mm ply and glued to foam blocks. The running surface and deck are cut with a hot wire using the sponson inner side as a guide. The 45 degree non trip can also be cut with a hot wire or a hacksaw blade. Similarly the centre section is cut with a hot wire using the 3mm ply sides of the centre section as a guide. The sponsons are glued to the centre section using a 13mm carbon fibre tube as a locating dowel, which also contributes to structural strength.

Before the sponsons and centre section are glued together with the carbon fibre tube in place it is necessary to cut out a section of the foam centre hull to form a nose section for the engine, radio and fuel tank. The nose is made to match the Kiwi 3 cowl, which eliminates the need to build a cowl from scratch.

The sides of the nose section are made from 3mm ply glued to the foam core and a wooden nose block is shaped to match the cowl. The 3mm ply for the sponson inner sides, the centre section sides and the nose section can all be predrilled together for the 13mm carbon fibre tube to facilitate accurate alignment. When the sponsons are glued to the centre section they should be set at 3.5 degrees angle of attack with the flat surface of the afterplane parallel to the building board.

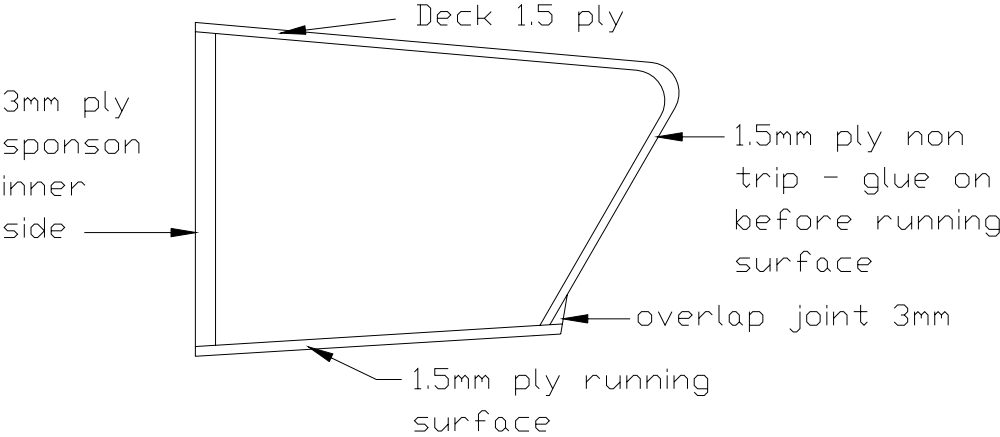


The transom is 3 x 3mm ply with aluminium plates for the strut and rudder bracket screws. The sponson transoms are 3mm ply with aluminium backing plate for the turn fin bracket screws.

The hull bottom is 1.5mm ply with the grain going across the bottom and is slit for the nose section. The deck is 1.5mm ply with the grain going lengthwise. There is a recess in the deck at the rear for the turbine tube, which is glassed.

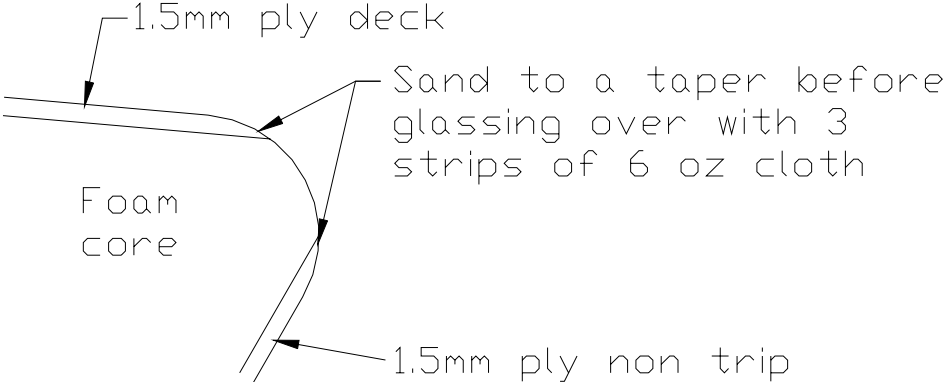
The rounded gunwales were also glassed with 3 strips of 6oz cloth.

Note: 1. The 1.5mm ply sponson non trips should be glued on before the sponson ride surfaces as shown in the diagram below to give a strong overlap joint with a sharp edge on the running surface.



2. Styrobond can be used to glue ply to the foam, but use slow setting epoxy for wood to wood joints.

3. Sand a taper to the edge of the ply where the rounded gunwales begin –



4. The afterplane non trips are shaped from foam as separate pieces and glued to the centre section. They are sheeted in 1.5mm ply before the bottom skin is glued on.

Running Gear.

The hydro ran well first time on the water with an Octura 1650 prop but was a little flighty and didn't quite groove on the turns. After strengthening the turn fin bracket and fitting a slightly larger turn fin the hydro was smoother and faster on the turns. The addition of 6 oz of lead in the nose and 2 oz lead to the rear of the left sponson improved stability in racing conditions. I now race with an Octura 1755, which is the prop used for the 102kph speed run. For speed runs a small turn fin is used to reduce drag.

If anyone would like a line drawing of this hull and more detail, feel free to contact me.

Tony Rutledge, 16 Reuben Grove, Lower Hutt. Tel: 04-5676362.

CALENDAR OF EVENTS FOR 2004

23 rd > 25 th October	Thunder Down Under	Tokoroa
6 th > 7 th November	Quad Series ??	TBA
27 th > 28 th November Nth	Rnd 5 Scale hydro series	Palmerston

Open invite: Wellington Offshore trial day at Berlina Bay from 10pm on Sunday 14th November. Email or Phone Wayne McNaught if you intend coming.

This is a new venue that has some protection from both the Southerly and Northerly winds, a small beach and has a public toilet in the bay. There is some off street parking close by. We have the permission of the Wellington City Council for this trial run, so we want to put on a good show to retain the use of it.

Wanted:

OS65 or 81 rear drum intake system.

Contact: John Belworthy, 37 Mahoe Street, Lower Hutt or

Email: jcbelw@callplus.net.nz