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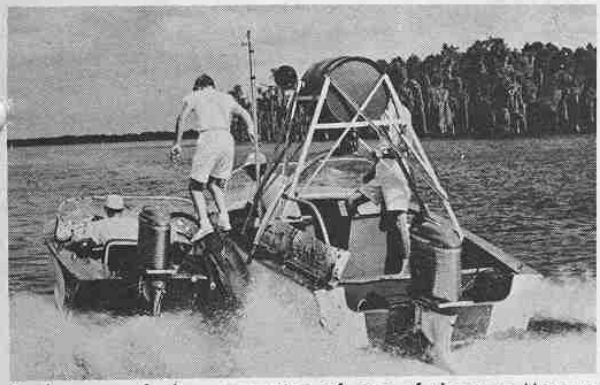
LATE NEWS

BOAT SPORT one minute gun

LAKE X, FLORIDA, Oct. 15--United States Auto Club certified that two Mercury Mark 75E outboard motors chosen at random from dealers racks, each powering a five-place, 15' Raveau family runabout hull, travelled the amazing distance of 25,003.286 miles in 34 days and slightly less than 12 hours. Both boats averaged better than 30.2 m.p.h. for a distance equivalent to a trip around the world. Both outfits averaged 7.9 miles per gallon of gas. Refueling was done underway with stops only for normal servicing.

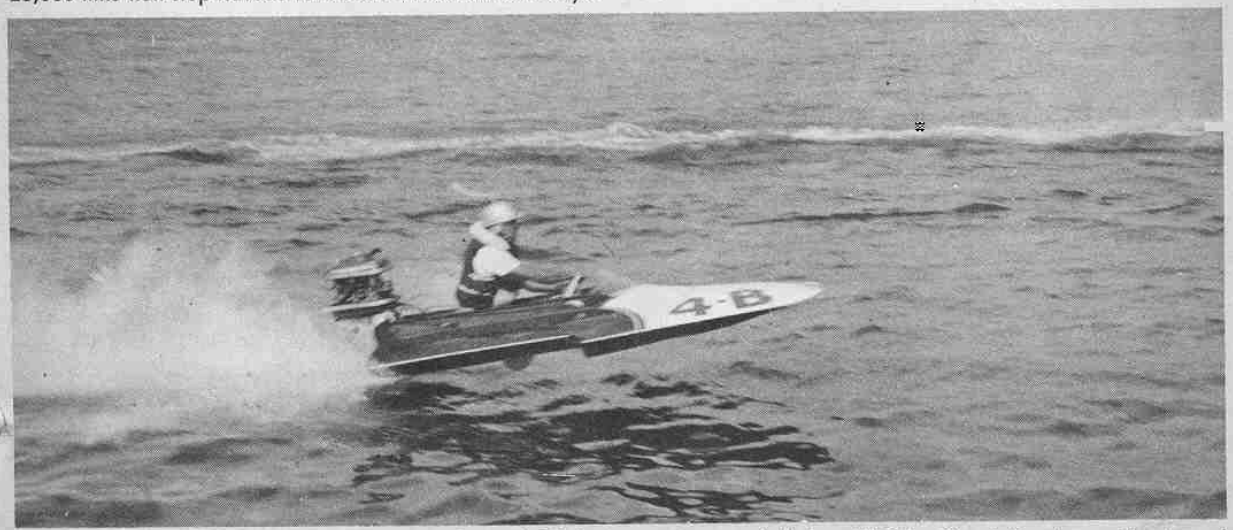


Underway refueling operation of one of the two Mercury 25,000 mile non-stop Raveau runabouts which ran 34½ days.

DETROIT, MICH., Oct. 27--At a meeting of Region 6, A.P.B.A. members held at the Detroit Yacht Club, the following officers were elected to serve during 1958: Al D'Eath,, Detroit, Chairman; Francis McFarland, Columbus, O., Inboard Chairman; Tom Hatcher, Wyandotte, Mich., Outboard Chairman; and Ed Hiller, Detroit, Unlimited Chairman and Region 6 Secretary.

LAS VEGAS, NEV., Nov. 16--All Risks Corporation of Detroit presented the following Good Sportsmanship Awards to speedboat racing drivers in three different categories of the sport: Thomas Carter, Drexel Hill, Pa., was awarded the outstanding good sportsmanship trophy among the inboarders. The alcohol burner outboard award went to Dr. Howard S. Jeans, Lynwood, Calif. The stock outboard trophy was awarded to Tommy Von Mello, Marion, Mass.

LAS VEGAS, NEV., Nov. 17--At the annual meeting of the American Power Boat Association at the Sahara Hotel, announcement was made of the election of the following officers for 1958. President, Donald L. Guerin,



Tommy Von Mello, hard driving CSH, DSH, CU and DU jockey was awarded the All-Risks Good Sportsmanship Award.

Marvin Henrich of Detroit, Mich., who refused to leap from his flaming "Wha Hoppen II" until he had brought it to a halt, and Bob Schroeder of "Wildroot Charlie," who rescued him, received Honorable Mention for the Sportsmanship Trophy.

Webster, N. Y.; Senior Vice-President, Dr. Wayne R. Ingalls, Bell, Calif.; Secretary, J. A. Colcock, Jr., Seattle, Wash.; Treasurer, Gerald T. Hanley, Jr., Warren, R. I. The election of the following Activities Vice-Presidents were also announced: Inboard Racing, S. E. "Sunny" Jones, Miami, Fla.; Outboard Racing, Chester McCune, Dayton, Ohio; Unlimited Gold Cup Racing, George J. Trimper, Buffalo, N. Y.; Cruiser Racing, Wm. Edgar John, Rye, N. Y.

A.P.B.A. members elected to serve three-year terms on the Council were Bob Wanamaker, New Hartford, N. Y.; Franklin Foulke, Essex, Md.; Fred Hallet, Oakland, Calif.; Doug Creech, Charlotte, N. C. and Merlyn Culver, Dayton, Ohio.

DETROIT, MICH., Nov. 25--Announcement was made of the winner of the American outboard high point trophy contest for the George H. Townsend medal. Rockey Stone, Willamina, Ore., scored a total of 12,171 race points with Harry Hayden, New Orleans, La., runner-up tallying a total of 9,513. Winner of the Paul B. Sawyer, Jr., award given to the driver who scored the greatest number of points in any two classes from April 1 to October 1 in A.P.B.A. sanctioned outboard regattas was Fred W. Hauenstein, Kingsburg, Calif., with a total of 7,252 points. Hauenstein barely eked out a victory in one of the closest point races in speedboating history, for Ward Angilley, Daly City, Calif., was defeated by only 6 points. Angilley scored a total of 7,246 for runner-up honors.

Unofficial stock outboard accomplishments would indicate that Skip Ritter of Hallendale, Fla., should take the overall twelve-month high-point crown. With less than a month to go, Ritter was leading in the Kiekhaefer Trophy point race with 28,132 points. This safely topped the second closest contestant, Edwin Wulf, Amityville, N. Y., who had scored a total of 16,684. The John and Flora Blank Stock Outboard one-class high point domination, however, appeared to be fairly well in the Amityville, N. Y., driver's grip for Wulf was leading his closest competitor, Richard Rees, Pottstown, Pa., 9022 to 7427.

THE A.P.B.A. Alky burner drivers may well be interested in a rules change that will permit use of any carburetor by <u>any</u> manufacturer of carburetors to be used on racing motors, rather than limiting carbs to those of American make. This means that the European-made Amal carburetor with its sliding throttle valve, rather than the conventional butterfly valve, can now be used on specially-designed-for-racing equipment or modified-stock-to-alky-burners. Whether any added speed will result from the switch-over that a lot of drivers are already contemplating, particularly on KRs, is not known but the change should help prevent blown equipment. Very probably the Amal Fischer will be used in preference to the Amal Ehrenfried as the former is more easily obtainable and little difference in performance has been recorded between the two types of European-made carburetors.

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COVER: The center photo shows the amazing Bob Bratton driving his Swift Big Bee Hydro in a race on the Hudson River at Cold Spring, N. Y. He's amazing because he is totally disabled war veteran who has not let his crippling disability keep him from the normal activities of a young man. Outboard racing lets him do it. Photo by Hal Kelly.

The lower picture shows the pits at the APBA National Stock Outboard Championships on Lake Quinsigamond, Worcester, Mass., which are fully reported in this issue. Photo by Joe Hardie.

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Joseph J. Hardie and Raymond J. Kelly, Publishers; Tom Davin, Editor; Richard Van Benschoten, Advisory Editor; Hank Wieand Bowman, Technical Editor; George Weaver, Art Director; Friede Strobl, Art Editor; Larry Haje, Art Assistant.

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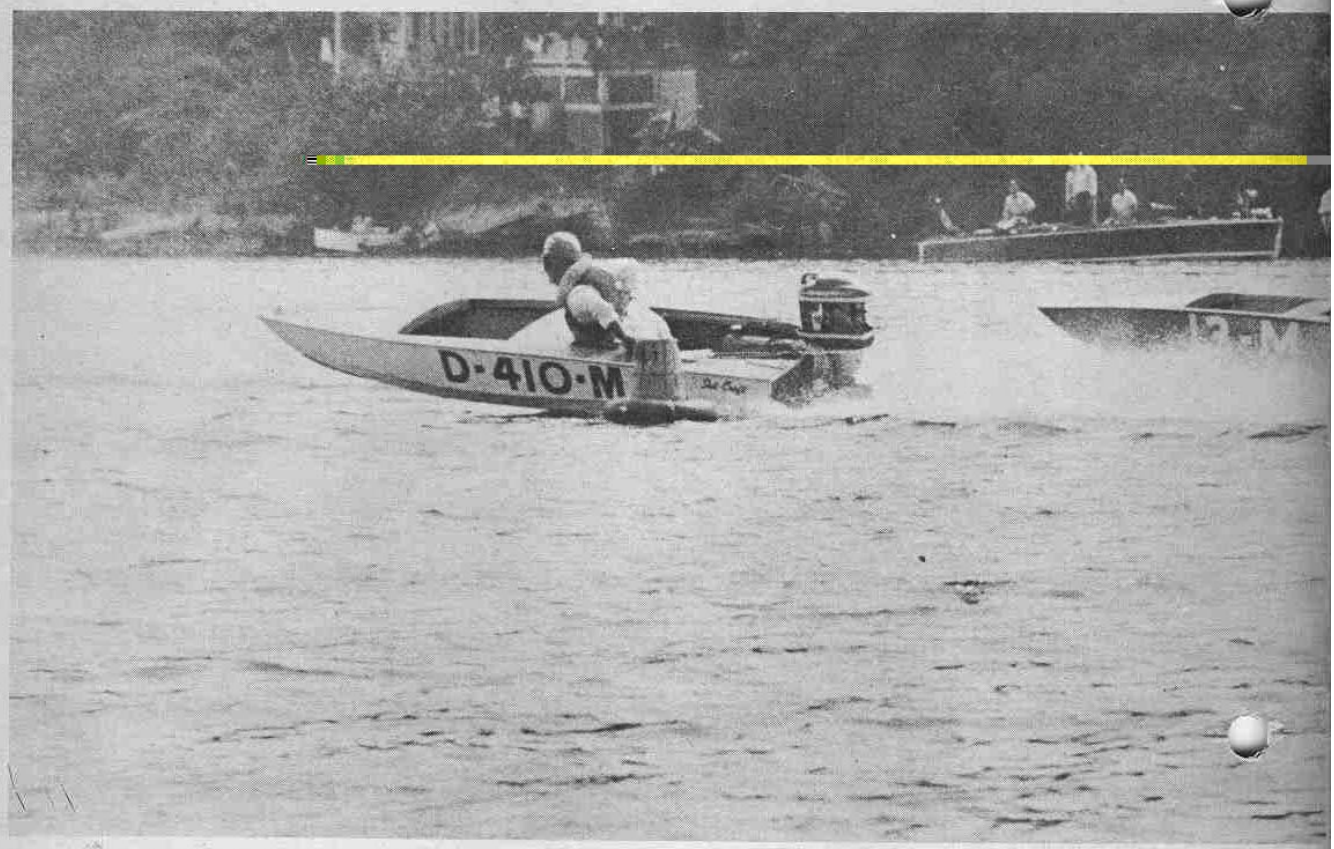
RAINY WEATHER AT WORCESTER, MASS., MAY HAVE COOLED THE CROWDS

BUT IT ONLY WARMED UP THE COMPETITION AMONG THE 702 ENTRIES



The Mennen Grand National 100 Mile Race was hard on boats and motors. Above: Neither Gene Aubrey (D-410-M) nor Skip Forcier (13-M) made the entire distance. Bob Robbins of West Suffield, Conn., won with a 51.6 mph speed.

By BLAKE GILPIN

THE BIGGEST STOCK OUTBOARD

A.P.B.A. Stock Outboard Championships

The American Power Boat Association's annual Stock Outboard Championships inevitably are held during the latter half of August and thus are the first of the title gos in the egg-beater field. The reason for this is wrapped right up in stock outboarding's tremendous popularity among the teenagers who have to get back to school.

But not only school boys and girls compete. The range of contestants in 1957 varied from the youngest, 9-year-old tiny Tommy Petrini, Annapolis, Md., to 63-year-old Ted Davey, Oakland, Calif. Neither driver figured prominently in the final point standing though both qualified into their respective class starting fields.

The sponsor of the event was the *Boston Globe*, sparked by Larry Healy, who had paved the way for the 1957 Nationals by bringing the Northeast Divisionals to Worcester, Mass., Lake Quinsigamond in 1956. The Worcester Chamber of Commerce and other civic groups got behind the event, which was staged on one of the most beautiful lakes in New England that had previously been the site for Olympic rowing trials. Ample pit facilities and parking space for contestants' and officials' cars had been cleared along the Worcester side of the lake.

The *Boston Globe* had gone all out for the event, but good fortune failed to favor either the stockers or their sponsor. The *Boston Globe* found itself embroiled in a labor dispute and without a paper to capitalize on its promotion. Rain and tragedy cast a pall over the race proper. The expected crowds of a quarter of a million or more who very probably would have attended the four days' events were driven away by the bleak weather and only a fraction of that number were on hand to see a record breaking total of 702 boats wet their bottoms, and frequently their

Bill Mennen, Jr., presents the golden cup of the Mennen Grand National to APBA's Bob Robbins, the first DU national marathon winner of the trophy. The smiling gal is Bob's date.

cockpits, in as dramatic a championship affair as ever has been staged.

A special added fillip gave the race even more importance. For the first time, under the sponsorship of the Mennen Company, the A.P.B.A. crowned a marathon king after sixteen earlier season preliminary qualifying events had determined the starters of the Mennen Century.

Mennen Grand National

Bob Robbins, a sporting goods employee of West Suffield, Conn., had qualified for the Mennen 100-miler by finishing second at the Winnebagoland race (the winner Bob Jacobson had already qualified by winning an earlier event at Norfolk, Va.) and had also come in first in DU at the annual Kennebec River Marathon at Augusta, Me. Robbins put on an exciting display of driving on the four mile, twenty-five lap course, covering the distance in 1 hour 56 minutes and 13 seconds, at what was announced as an average speed of 51.6 mph.

Personally, I didn't kid myself on this announced speed and since I know the timing was accurate, I was left with the feeling that the four-mile course was actually considerably shorter than advertised. I wasn't alone in this thought and among others, Chief of Police Ken Burns of Shrewsbury,

CHAMPIONSHIPS ON RECORD

Part of the 702 boat turnout that lined more than a mile of Lake Quinsigamond's Worcester shore.

The only Canadian to place in the Stock Nationals was John Webster of Toronto, Canada, who took 5th in ASH. Here he's leading at the 2d turn.

Skip Forcier's crew greet the East Lansing DU Champion who drove his Sid-Craft Sunburst (13-M) to win two straight heats.

THE APBA STOCK NATIONALS AND THE MENNEN 100 MILER

Oh, didn't it rain! Two straight days of rainy weather made the Stock Nationals a dismal affair for spectators despite the exciting competition.

That's Tiger Petrini of Annapolis making a new mile mark.

Motels were jammed, so many competitors camped out.

On the shore of Lake Quinsigamond, the crews of the Detroit entries, Johnson and Lenk, prepare their DU Raveaus.

considered one of the country's top rowing coaches and whose familiarity with the Lake Quinsigamond waters and distances along the lake front is second to none, shared my opinion. Whether Robbins in his Mercury 55H powered Sid-Craft averaged 51.6 mph or closer to 45 mph has little or no bearing on the fact that the 21-year-old helmsman was definitely the class of the field.

In the first lap, Ted Moberg of Wauwatosa, Wisc., jumped out into an early lead and proved that a Merc KG-9 properly set up can still run as quick as any D mill on the water. However, Robbins was determined to bring the Marathon title into New England and since the only other New England entry, Tommy Von Mello, was lost at the start back in fourteenth position, Robbins went all out at the end of the fourth mile and moved into the van as Moberg dropped back into fourth.

At this stage, though Robbins appeared to be opening up a lead, Skip Forcier, a Michigan college student, helming another Sid-Craft with abandon, had moved from an eighth position at the start into third at the end of one lap and then bounced up into second, though almost 4½ seconds behind Robbins.

Robbins' technique was to go full out down the straightaways and nurse his rig carefully through the corners, taking no chances of flipping it, knowing that the 100 miles in which he had to round fifty 180 degree turns was eventually going to take a toll of more careless helmsmen.

Forcier, by contrast, lacking some of Robbins' straightaway speed, tried to make it up in the corners and was a real crowd pleaser, going through the turns full bore, albeit as wild riding and hairy as was possible. Forcier, however, was destined not to figure in the final results, for he was forced to pull into the pits twice with mechanical difficulties and finally dropped out of the grind entirely at the end of nineteen laps.

From the fifth lap on, Robbins continued to build up a few additional seconds' advantage on each circuit and was never seriously threatened. Moberg once again took over second position and held it through the 56th mile, when his strategy of electing to refuel during the race rather than carry a full fuel load cost him a second position and nearly dropped him entirely out of the money for his near minute in the pits pushed him back into a fifth finishing position.

Almost unnoticed, during the early stages of the race, was Harold Tolford, Jr., a 33-year-old aircraft model maker from Seattle, Wash. Tolford drove a homemade boat called *Sandbox*. The hull is similar in design to the one in which he had won the annual Sammamish Slough snake dance marathon in his home state. Oddly, the design of Tolford's boat, which had permitted him to successfully negotiate the country's most hazardous and twisting outboard race, was a bomb on the straightaways but had the skitterish handling characteristics of a real sandbox in the corners. The boat tail rode, bobbed, weaved and obviously required consummate skill to negotiate the fairly gentle looping corners at half throttle. Tolford seemed unconcerned with the bronco antics of his steed, and he had plenty of stuff in his rig on the stretches.

However, the northwest racer had started conservatively, was laying twelfth at the end of four miles, fourteenth at the end of eight miles and his early performance was all but unnoticed by the fans and reporters. From about the end of the tenth mile, Tolford apparently took stock of his poor position. He decided that a 3400 mile cross-country trek certainly shouldn't be wasted by playing a waiting game, so he started to pour on the coal. His approach was a patient one, particularly in view of some of the frantic driving going on among the front runners in the hotly-contested marathon that was to last for many, many more laps.

At the end of twelve miles, Tolford was still in thirteen spot, then he moved up to twelfth at the end of sixteen miles. His pace, however, was a steady one and at the end of twenty-four miles, by virtue of picking up a fraction of a second here and there he had moved up into tenth. At this stage, the lead positions were held by Robbins, Moberg, Gene Aubrey of Detroit, Mich., Dave Hart of Temple City, Calif., and Eddie Tom of Fort Wayne, Ind.

Tom, whose boat normally is a bomb in the corners as it dips down almost to the sheerline and then pivots around the pins as though she were tied to a wire, had been causing Tom consider-

Bud Goodwin, the only New England Champ, receives the CSH Globe trophy from *The Boston Globe's* Larry Healy.

ıble trouble because of an off-balance uel load. Gradually, as his fuel was onsumed, the weight distribution im- roved and by the end of about thirty niles, Tom was beginning to corner is *Rinker* in its customary sensational nanner.

Aubrey, meantime, had been pitched ut of his boat in a turn, swam back o it, was able finally to catch the easing, slow circling craft but was ever able again to move up into a threatening position and finally at about the half-way mark, the Detroiter dropped out.

At midway through the hundred (give or take a few miles), Robbins held a minute and 25 second advantage over Moberg. Tom was running third, Hart fourth, Forcier fifth, Jack Holt of Alexandria, Va., sixth, and Tolford, seventh. Fifteen of the original starters were still in the race.

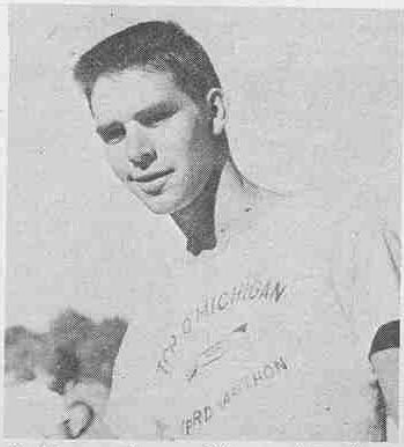
Jim McCombs of Niagara Falls, N. Y., with his power plant suffering from lost fuel pressure, was laying to at the north end of the course. McCombs called to some of the press members located near the turn, "Anyone want to buy a boat?" as he gave up frantically pulling the string on his thirsty mill.

Von Mello and Ray Johnson of Detroit, Mich., had been lapped before the halfway mark.

At approximately the three-quarter

THE APBA STOCK Outboard Championships

Chris Erneston, APBA National BSH Champ, proved that starting on the button is a skill that makes winners.



Besides setting a CU speed mark at Worcester, John Ennenga merged a second and a first to take the CU.

Jack Hall, BU winner, doesn't seem to mind the weight. A later accident kept him out of the Alkys.

mark, at the end of 72 miles, Robbins was running 2 minutes and 31 seconds ahead of his closest competitor. At this point, those who hadn't been taking a tape on the boats and their positions very probably thought that Harold Tolford was merely an also-ran. He was still in seventh at the end of twelve laps, then on the thirteenth lap, he had seized an advantage as Jack Holt broached, missed a buoy and had to circle back to correct his faulty navigation. This error probably cost Holt second position for Tolford at this stage moved into fifth, passing Hart who became entangled in the chine clashing in the same turn. Holt dropped from fourth to sixth. A lap later Tolford was fourth as Forcier again suffered mechanical difficulties and limped into the pits. Then Moberg made his ill considered stop for fuel, which put the West Coast driver up into third place in the dogfight.

On the sixteenth lap, Tolford and Tom were racing bow to bow and at the three-quarter point Tolford finally took over second spot when Tom was forced to drop out temporarily and replace a damaged propeller. This blade banging cost Tom any chance of finishing in the first five prize winning spots. He ultimately took the checker in eighth position.

By the time eighty miles had been raced, the boats were no longer all running in the same lap. In addition to Von Mello and Johnson (the latter had by then dropped out), Charles Fitzgerald of Hague, N. Y., and Forcier had both been lapped at least once and many were of the opinion that Tolford who had been unsensational in the early stages was included in this group. Actually Tolford had by then moved up to within 2 minutes and 30 seconds of the leader, Robbins, before Robbins in the final twenty miles decided to add an additional safety cushion. The Nutmeg State racer began to push deeper into the corners before throttling back and ultimately got the checkered flag nearly three minutes ahead of second place finisher Tolford.

Jack Holt was 38 seconds behind Tolford, just about the margin of time he had lost in circling back to pick up the missed buoy. Twenty-seven seconds behind Holt came Ray Lenk, Detroit, who took the flag in a near photo finish with Ted Moberg who crowded Lenk's rooster tail less than a second behind.

Pre-race favorite and winner of four of the year's major marathon events, Bob Jacobson of Flint, Mich., came in sixth and out of the money. Robbins, the winner, won an-all expense trip for two to Barbados plus $200 in cash and the Mennen Gold Cup presented by William G. Mennen, Jr. Robbins retained the Cup but graciously turned over the trip for two to his mother and father as a wedding anniversary present. Tolford headed home $400 to the good, with Jack Holt enriched to the tune of $250 and Ray Lenk garnering $150.

The Stock Outboard Championships

The first of the championship heats was for a full field of the tiny 7.5 cubic inch JUs while many young hopefuls in the class who had failed to qualify watched from the beach. At the start, four of the drivers John Zalud of Chicago; Jim Osborne of Cuyahoga Falls, Ohio; Doug Van Rossum of Baltimore, and Dennis Peternell of Schenectady, N. Y., jumped the gun and were disqualified.

Van Rossum led the way home, but first place points went to Tiger Petrini of Annapolis, Md., helming his Karelsen hull *Houn' Dawg*. Picking his way up skillfully from an eighth starting position was Danny Ziegfeld of Baltimore, who ultimately finished 3 seconds behind Petrini, with Bob Thornton of Alexandria, Va., scoring third, followed in by 13-year-old Barbara Schumaker of Seattle, Wash., who was driving the outfit that her 14-year-old brother Billy had twice raced to the class title.

In the second heat of JU, Petrini led throughout the distance, dogged by Danny Ziegfeld who took the checker 5 seconds after the 11-year-old Annapolis boy got the flag. Petrini's fastest five-miles was covered at a 26.116 mph gait.

The second championship brought together sixteen "36" class boats with Dan Schwartzenbach, Los Angeles, in a homemade hull taking the initial heat at an average speed of 36.096 mph. Schwartzenbach wound up in third in the second heat as Bob Lenschow of Sycamore, Ill., won at a slightly faster 36.217 mph gait.

But Schwartzenbach was able to merge his first and third for a 625 point total, topping second place winner Lenschow who scored 527, who in

(*Continued on Page* 34)

One of the two successful defending champs was Wild Bill Holloway who drove his Sid-Craft to straight wins.

Dave Hoggard, the new A Stock Hydro king, is crowned by one of his crew members in the inspection area.

Bob Thornton, fondly known as Two Bit by his JU pals, scored fourth among the 16 title seekers in the junior class racers.

The C Service Hydros get off. NOA National Champ Bill Becker is in S-144, but clock-jumping killed his two-title bid.

THE APBA ALKY NATIONALS

The Alky Nationals

At McKeesport, Pa., September 14, 15, 16, the Greater McKeesport Chamber of Commerce in cooperation with the Mon Valley Speedboat Club sponsored the A.P.B.A. sanctioned National Outboard Championships.

The M Class championship was rather skimpily contested, for with only five boats answering the five-minute gun and the defending champion abdicating without a scrap when a last minute change in plans prevented the California schoolboy Eric Molinar from coming east to defend his title. Just what happened to the Californian defending champions is a little difficult to say, for six of the previous year's title holders from that state failed to put in an appearance. However, very few easterners went to California the year before and apparently the alky boys just don't have the yen and the drive to travel shown by the stock drivers.

The first heat of Ms was taken by the competition record holder Dr. R. D. Frawley of Dravosburg, Pa. Frawley piloted an Evinrude powered Mosher hull at an average speed of 36.749 mph to soundly defeat second place finisher Don Whitfield of Verona, N. J., by 11.2 seconds at the wire.

In the second heat it looked like Frawley again, but midway through the distance his high winding outfit ran out of zip when it burned a piston in the second corner and Whitfield moved home to a dominant victory with a 29 second margin over second placer, Art Brown from Olmstead Falls, Ohio. Frawley was later disqualified for not showing up in the inspection area, which altered Whitfield's second place finish to a first in the first heat and a firmer hold on the title.

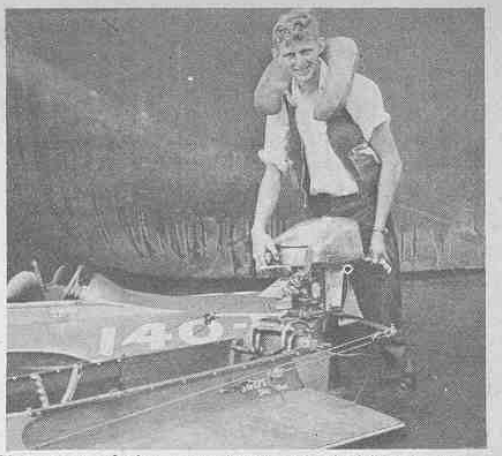
Fantastically, Whitfield won the crown in a seventeen-year-old, three-point Jacoby which four times previously had carried him to national honors. Second spot went to Art Brown, though he was beaten in the second heat by Boots Morphy of Dayton, Tenn., who might well have taken second position, but during the first heat she picked up a branch on the lower unit of her motor, lost steering control and instead of trying to shake free the impediment on the course, she made the mistake of returning to the pits for help, thereby being disqualified for that heat.

Despite the absence of perennial title holder Orlando Torigiani of Bakersfield, Calif., the A Hydro field was top quality all the way through. Bill Tenney, Crystal Bay, Minn., was an early (and expected) threat in the first heat with his Konig powered outfit.

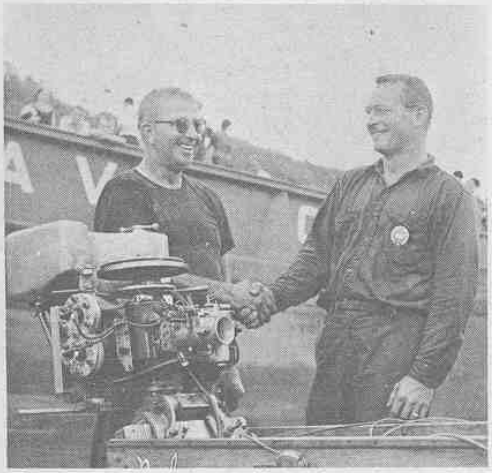
However, while he was riding in second spot to ultimate winner Mel Kirts of Elkhart, Ind., Tenney hit a swell, corkscrewed into the air—and that was it. Jack Leek, of Tacoma, Wash., who holds the mile record at better than 61 mph, with a Swift hydro powered by a Merc conversion, flipped at the beginning of the second lap while engaged in a duel with Jess French of Flint, Mich., for third position.

(*Continued on Page* 14)

Bill Tenney copped the C Hydro diadem on his return to the National scene after missing 1956.



Youngest of the new APBA title holders is Dave Christner, 22, who took the B crown.

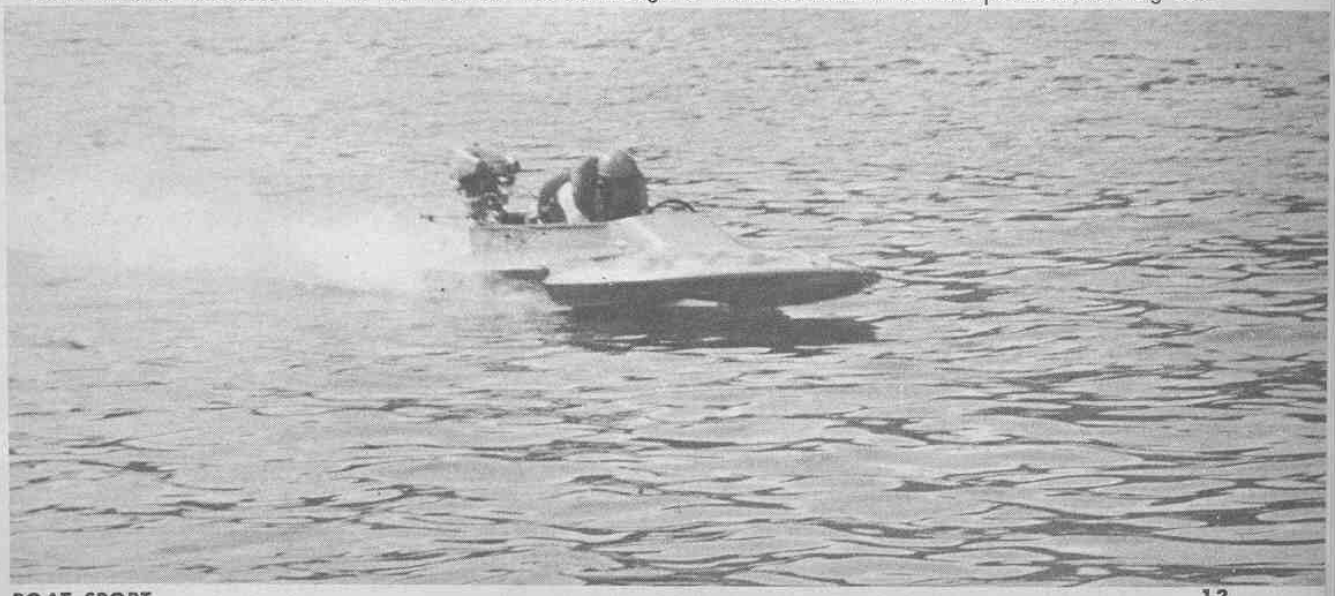


After 9 years, J. B. Broaddus, left, recaptured the APBA F Hydro title. Hershel Starnes finished 4th.

Ellis Willoughby took the C Service Runabout title with his Evinrude powered De Silva.

Few West Coast defenders at McKeesport. B Hydro crown goes to a Merc for the first time.

Dave Christner took second in the first heat but flashed through to win the second in his Merc powered *Swift Big Bee*.



WITH THE ALKY BURNERS ON THE MONONGAHELA

By the end of the second lap Kirts, helming a Konig powered Fillinger, had built a tremendous lead. In second spot, Dave Christner of Quincy, Ill., in an alky burning Merc on a Fillinger hull, successfully staved off threats from Jess French with a Swift-Konig rig and young Doug Earnhart of Charlotte, N. C., who was also squeezing a Konig throttle on a Fillinger. Kirt's speed in the first was 46.012 mph. In the second heat, for two laps Earnhart hung onto the lead, with Kirts, Christner and French all bunched on his rooster tail waiting for the 18-year-old student to make a mistake. Earnhart never did, but his outfit lacked some of the zip of Kirts's rig. The Indiana veteran teamed this with driving savvy to catch Earnhart on the straightaway, slashed him off in the corner and beat him by 2/5 second in an exciting run to the finish. Christner in finishing third garnered the runner-up spot to the new champion.

The event cast a new light on A Hydro racing for no longer was a well-set-up KR able to out-run the field—in fact out of six of the ancient Johnson alternate firing twins in the event, the best finishing position was a seventh spot, while Konigs and modified Mercs held down the top money positions.

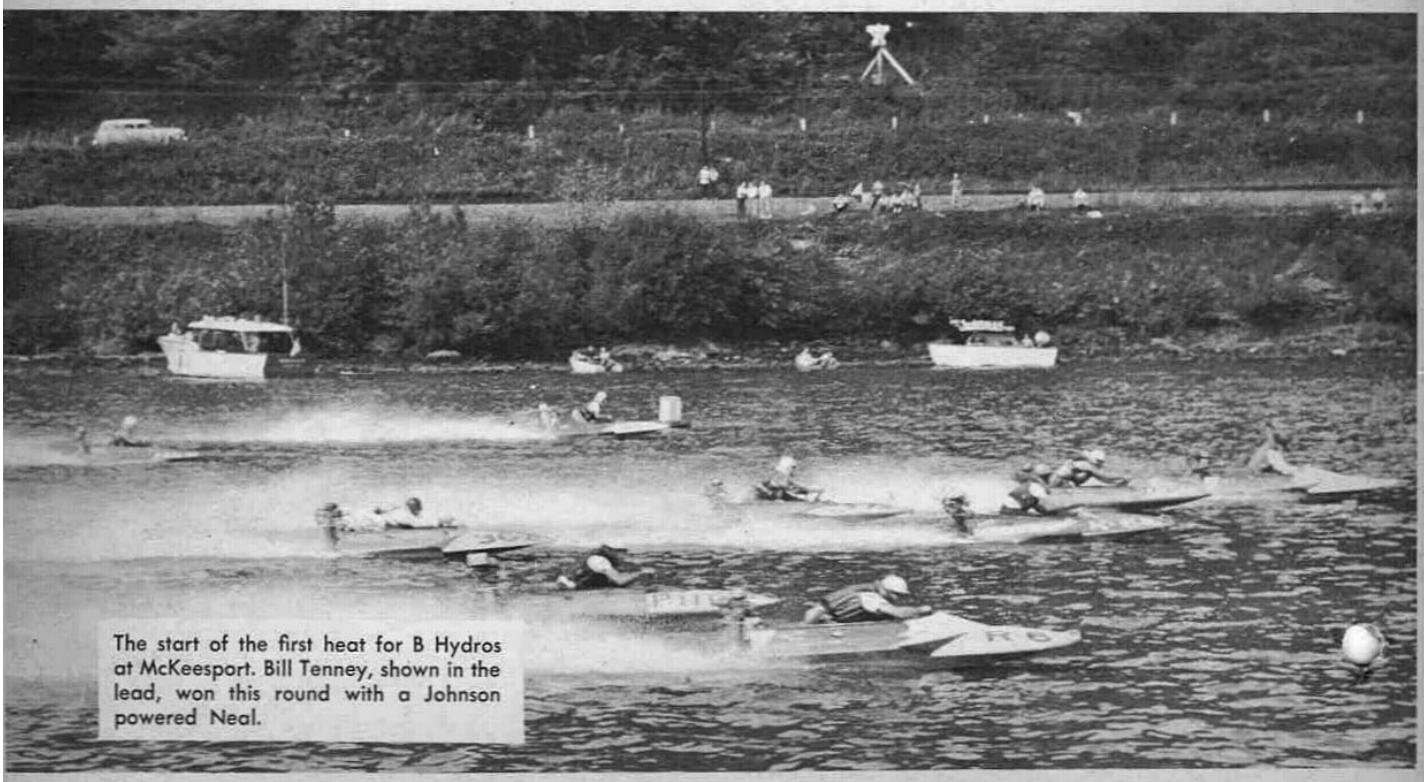
In B Hydro the picture was repeated, with the field liberally filled with Konigs and modified Mercs and Champions, as well as the traditional SRs. Bill Tenney, with an SR opposed twin Johnson, scored a 1 second margin victory over Dave Christner who helmed a modified-to-alky stock mill, but in the second heat Christner clocked the identical time and speed average of 50.790 mph as had Tenney in the first heat, but this time the best the Crystal Bay driver could do was a fourth. The A.P.B.A. B hydro crown went to a Mercury power plant for the first time in its history.

In C Service Hydro, Homer Kincaid of Carbon Cliff, Ill., driving an Evinrude powered Neal, averaged 48.648 mph to take the first heat and merged this with a fifth place in the second to garner the class crown. Second honors went to Mel Ezzo, Columbus, Ohio, who drove the same combination (Evinrude-Neal) to second and fourth place finishes and an overall second place spot with 469 points.

Any forecast before the C Hydro events had started would certainly have given the nod to one of the long tried and true PR 65 Johnsons. Actually, the title did go that way with Bill Tenney finishing second in the first heat and winning the second to take the crown with 700 points.

However, the real eye-opening rig on the course was a cabover designed MacDonald hull powered by an Evinrude in which C. W. "Doc" Jones of Phoenix, Ariz., scorched through the first two laps and rode at cocked throttle in the final lap without anyone creeping near his rooster tail. In the second heat, however, Doc was caught napping. Though he was fourth boat across the line at the start, he'd been squeezed into a bad position over close to the officials' barge, got caught in the jam in the first turn, dropped back to sixth and made it up to fourth on the backstretch with Tenney leading. Jack Leek in a Merc 30H modification on an Entrop-Leek cabover was in second and Homer Kincaid third. In the second lap, Doc Jones got by Kincaid on the backstretch but reached the shut-off point before he could make a bid to better his position. In the final lap, though Doc screamed down both straightaways, closing the distance on the two leaders to a boat's length in both cases, the two savvy front running drivers merely closed the door on Doc and that's how it wound up, with Tenney taking the title, Doc being cast in the runner-up role and Leek third. Again, however, it was refreshing to have a three-motor rather than a one-motor race.

The F Hydros, fifteen strong, presented a problem of preselection of the winner. Hugh Entrop of Seattle, Wash., was certainly expected to show the speed of the class but his per-



The start of the first heat for B Hydros at McKeesport. Bill Tenney, shown in the lead, won this round with a Johnson powered Neal.

formance at three previous nationals made him a doubtful winner.

No one for a moment would argue that there is a boat in the country that can stay up with Hubert when his Mercury-MacDonald combination is peaking. But the rig has been notable for its temperament and in the first heat, the prima donna outfit kicked up a tantrum in the early stages.

However, for the first time in three years, there was something else on the water just as fleet as Entrop's outfit. This was a Swift-Mercury combination driven by Freddie Goehl of Quincy, Ill. Goehl might have had the race in the bag—at least he built up a 50 yard lead by the time he reached the second turn buoy of the first lap. There, with a muttered curse for pleasure boats who can't keep their rigs at rest and who send up unexpected rollers. Goehl's bid for 1957 A.P.B.A. fame was ended. The Swift took off over a runabout's wake, dangled airborne, then dropped tail down, galloped on its side for about ten yards, and plop—Goehl was out for the day.

J. B. Broaddus of Lake Wales, Fla., driving with abandon coupled with skill that he hasn't shown in the past nine years, pushed his Neal-Evinrude 4-60 powered 60 cubic inch mill into the lead at this stage and soared home with a big grin on his face more than 35 seconds ahead of second place finisher Joe Michelini, Chicago, Ill. In the second heat, Entrop got his bomb percolating but the performance was anti-climactic. It was Entrop, alone, running for a couple of laps against time, with the balance of the field parading around behind him. At cocked throttle, Entrop stroked through the last lap, still averaging 57.216 mph and scoring 400 points, enough for a third spot overall finish. Broaddus, after a brief but heated duel down the second backstretch with Joe Michelini, figuratively shouted "touché!" as Michelini flipped and J.B. coasted home at a 53.349 mph gait in third spot, but with enough points to take the title back to Florida.

Bob Thornton of Silver Springs, Md., who divides his time between boat and midget auto racing, scored runner-up honors and earned them with a third and second place finish, won by hard aggressive driving that put plenty of faster outfits far behind him.

The C Service Runabout events were taken by Ellis Willoughby combining second and first spots with his Evinrude powered DeSilva, with Fred Tod Brinkman, also of Springfield, Ill., scoring a win and a fourth to take overall second.

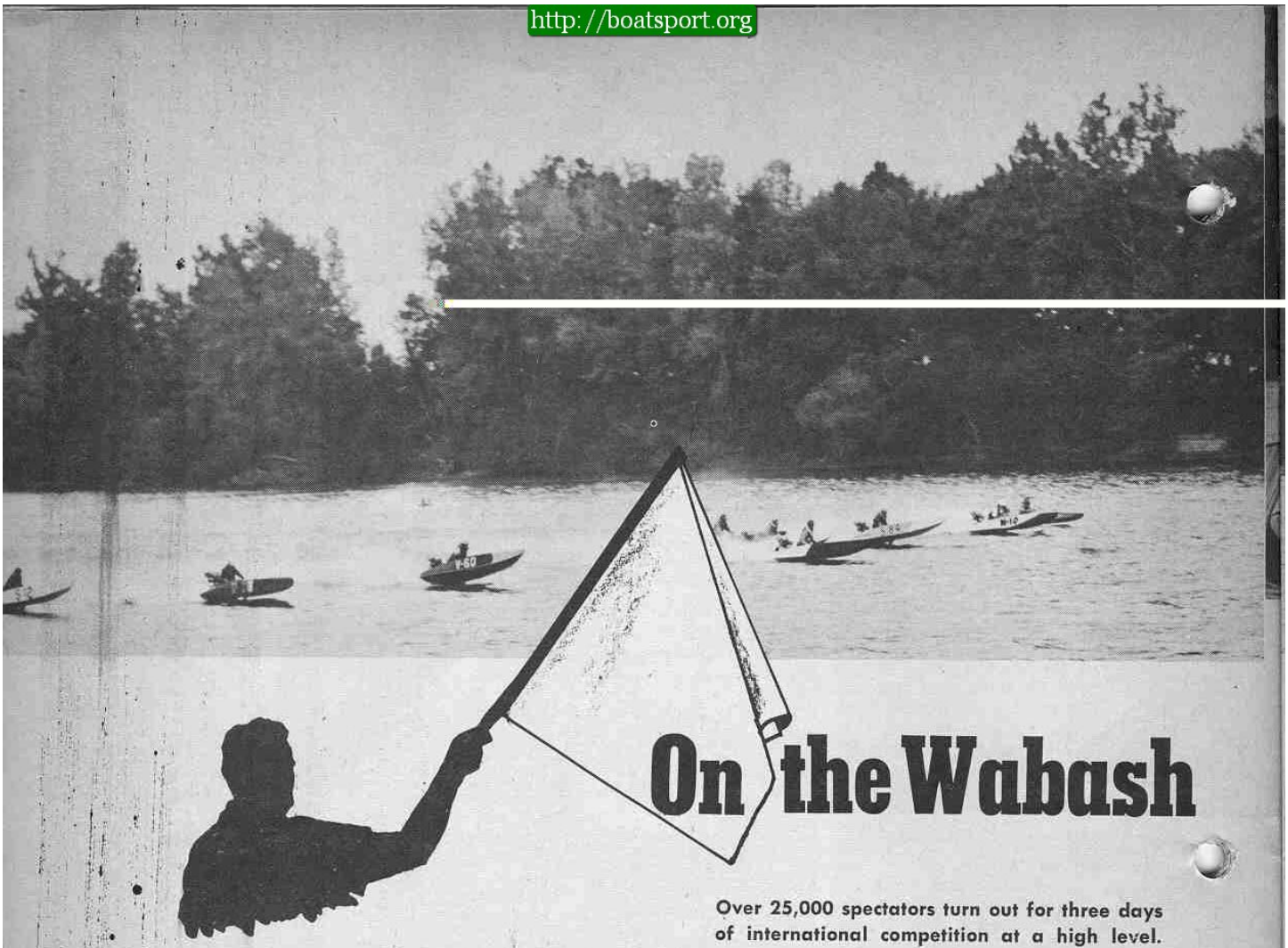
In C Racing Runabout Rockey Stone, Willamina, Ore., who is the country's leading point scorer in the alky burner classes, has been a hard luck driver in national events in the past. For 1957, the dapper 53-year-old lumberman driving a PR 65 Johnson on a MacDonald built runabout, took his title from fourteen other contestants with relative ease. He scored straight heat wins with a 9 second margin victory in the first and a 6 second victory

Don Whitfield won the Midget Hydro title for the 5th time in his 17-year-old boat, built by Pop Jacoby. That's Pop's son, Emile Jacoby congratulating Whitfield on his triumph.

margin in the second over Stan Levendusky, the racing farmer from Kansas City, Mo.

One of the highlights of the event was provided by Paul Hayes of Thayer, Mo., who was a bit impatient in the second corner when he found himself with speed to burn and riding in third spot. Had Hayes bided his time, the results might have been different, but he didn't and barrel rolled the DeSilva around the buoy. Between heats, Hayes, his wife, his daughter plus a dozen eager assistants in the pits all tried to get the yellow job running for the second heat. They bailed water out of the boat, flushed it from the motor. Then Paul roped as frantically as he had driven, but all to no avail for the most the motor would do was give a protesting cough.

The regatta in retrospect was a good one despite the fact that the location was not the prettiest that one could have selected, unless hovering stacks of heavy industry appeal to your race-going aesthetic sense. However, the hospitality was warm and the good turn out of boats and equipment, coupled with new and younger faces, bodes well for the future of the A.P.B.A. alcohol division. —B.G.



On the Wabash

Over 25,000 spectators turn out for three days of international competition at a high level.

The N.O.A. Alky Nationals

Mt. Carmel, Ill., September 7, 8 and 9 was race headquarters for the National Outboard Association's Division I alky burner championships, sponsored by the Wabash Valley Boat Club. Though the location on the shallow Wabash River between Illinois and Kentucky is far removed from any major metropolitan area, an estimated crowd of 25,000 spectators were on hand during the three days, which brought in competition from all over the United States as well as Canada and Germany.

A total of twenty elimination heats were run off before the championships could get underway. During the eliminations, the drivers were notably edgy and crowding the starts. Twice Sel Preston disqualified the entire field, which eliminated from the final competitive events some of the top drivers who might otherwise have changed the picture. However, starting with the clock is part of the skill of the game and a driver who jumps the clock has blundered in the first requirement of a national champion. So, viewed from the standpoint of rounded skill, the eliminated drivers deserved what they got.

In A Hydro, Dave Christner eked out a slim win over Vern McQueen of Springfield, Ill., McQueen throttle squeezing a Konig, Christner his traditional Merc power. In the second heat, Christner failed to finish, but again there was a thrilling race right down to the flag with McQueen scoring a slim margin over the German racer Dieter Konig of Berlin. Konig, however, in the initial heat had done poorly and finished seventh, so McQueen became the new title holder with a total of 700 points. Christner with his lone win was runner-up.

C Racing Runabouts were next on the schedule. Rockey Stone took the first five-mile event, tagged closely by W. C. Fields of Kansas City, Mo. In the second event, Fields bettered his initial performance and grabbed off first, pushed down to the tape by Clyde Wiseman, the motor parts manufacturer from Willoughby, Ohio. Final point scoring gave Fields the title with Stone taking second.

The B Hydros were the next group called to the line and Dave Christner jumped into an early lead and was able to hold it for two of the five laps over the one-mile circuit. However, Dieter Konig was not to be denied and his driving was both aggressive and letter perfect. Though Christner refused to give him an opening in the corners, Konig wrested the lead from the Quincy driver on the back stretch of the third lap and then proceeded to prove that the German built two-cylinder, alternate firing, 20 cubic incher could show its heels to power plants of other makes when the chips are down. He lead Christner in for the black and white victor's flag by a 2.6 second margin. The second heat was won by Bill Tenney who had finished fourth in the first go round. Christner drove with a consistency for which he is rapidly becoming noted and finished second to Tenney, 2.2 seconds behind him. Konig had scrapped his way up from a poor start (starting is not one of Dieter's strong points) to fourth at the end of one lap and finally a third spot, which gave him enough points to take the title, with Christner winning the second place trophy and money.

The final championship event during the first day's activity was in C Service Hydroplane. At the outset it appeared to be a four-way battle between Rockey Stone, Ellis Willoughby (former N.O.A. high point title holder),

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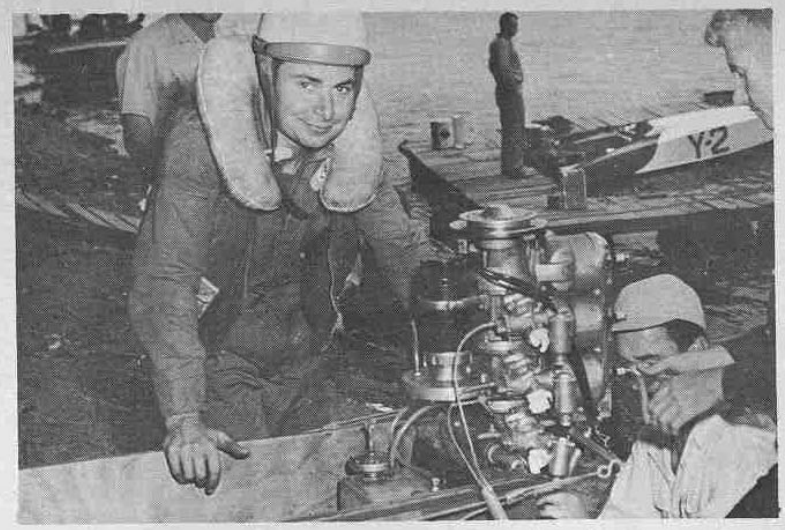
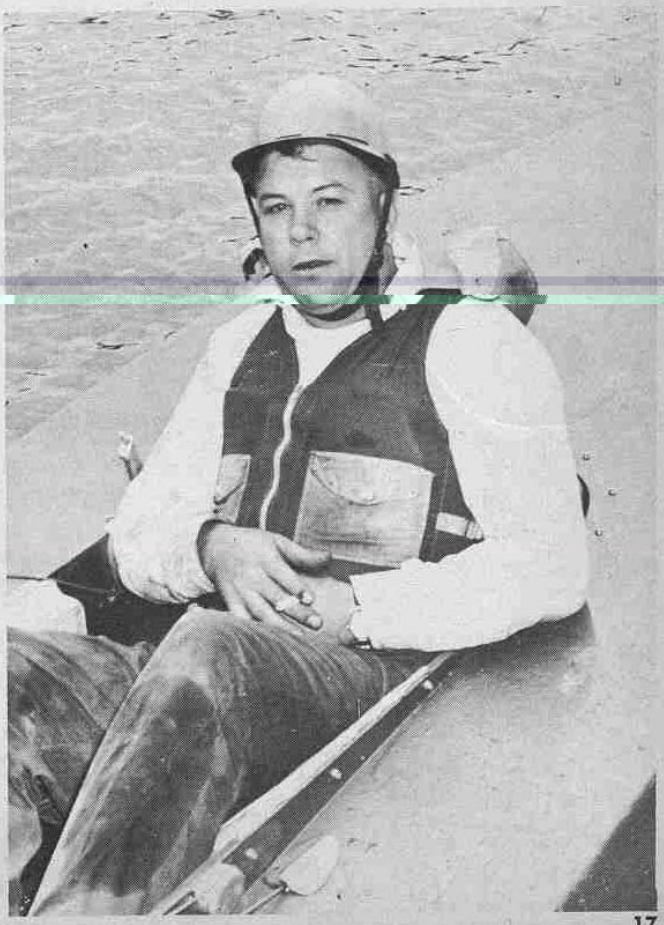


Dieter Konig, European Champion, won the NOA B Hydro events with his three-cylinder, 30 cubic incher of the same name. He was runner-up in the Free-for-All. The picture on the facing page shows the start of the CRR championships. It was won by W. C. Fields of Kansas City, Missouri.

with the NOA DIVISION I ALKY NATIONALS

NOA C Service Hydro champion, Jerry Kerns, won in a point tie over Ellis Willoughby.



W. C. Fields of Kansas City, Mo., relaxes in the cockpit of his De Silva after winning the CRR title.

You'd smile, too, if you were Mel Kirts, the new APBA A Hydro champion who also won the NOA Free-For-All-Hydro Fox trophy, a non-championship event.

Jerry Kerns, West Milton, Ohio, and Dave Barnes, Zanesville, Ohio. Through the first lap the four ran closely bunched with Ellis Willoughby finally eking out the necessary edge to get out into the smooth water in front, while Stone and Kerns alternated positions in second and third spot for the first three laps. All four drivers were still closely enough bunched going down the backstretch of the final lap for it to be anyone's race if the leader slid wide or any of the other drivers made a helming error. Willoughby got to the checker first, less than a boat's length ahead of Kerns, and Stone and Barnes following right in Kerns's wake. In the second heat, as might be expected with that close a race, the results were switched. Kerns finished with a 1.4 seconds advantage over Willoughby, winding up in a point tie. After the scorers completed their mathematics, Kerns had the title. Barnes wound up third when Stone failed to finish.

The opening heat for C Service Runabout on Sunday brought the entire crowd on the banks to their feet as Bill Becker of Vermilion, Ohio, and Ralph Dowling of Cleveland, changed positions twice during the first two laps. Stan Levendusky got into the fray in the third lap moving past Dowling, grabbed the lead from Becker at the end of the fourth lap and appeared to have the race won when he spun out and finished tenth. Dowling finally scored a victory which went into the books as a .1 second advantage over Becker, though the margin was a matter of inches and the actual winner could only be determined from a vantage point on the officials' stand where sighting could be made from the starting point to the starting buoy. The second heat was a bit of a let-down as Becker jumped into the lead with Ellis Willoughby running second. The boats never changed positon and Willoughby was beaten by a full 2 second margin at the finish line. The race, however, was not without its excitement. Stan Levendusky, off in eleventh position, worked his way up to seventh at the end of the first lap, into sixth at the end of two laps, fifth going into the beginning of the fourth lap and finally picked a hole in the first corner of the fifth lap to take over fourth. His uphill performance wasn't enough to put him into one of the title positions, for Becker had already sewed up top honors with a second and a first and Willoughby was named runner-up with a third and second.

The F Hydros were next on the schedule and most of the fans watched fascinated as Hugh Entrop racked his cabover rig around the ten turns and through the straightaways for a very convincing win. However, as only Entrop can know, a Championship title is never won in a single heat. Buried back in the pack at the start in tenth position was Freddie Goehl who apparently is just as good moving up through the field as he is hanging on to a lead position. While the rest of the field remained relatively static, Goehl moved up into seventh spot at the end of one lap and into fifth at the end of the second lap, where he was held off for two laps by a determined Ralph Hemmindhaus from Sandoval, Ill. On the backstretch of the fourth lap, Goehl managed an overall position and then moved into fourth, ran neck and neck down the next straightaway with Ronald Williams of Keokuk, Iowa, took Williams and finished two boat lengths behind Bruce Hoff of Iowa City, Ia., who was later disqualified. This gave Goehl second position.

In the second heat, Goehl timed his start perfectly, got into the first turn first and surprisingly to all on the banks, took the checkered flag at a faster average pace by a full 3 seconds than Entrop had been clocked in winning the first heat. To Entrop's credit was the fact that he started ninth, moved up to third at the end of one lap, was pressing Goehl coming down the main stretch entering the third lap when motor trouble dropped him back to seventh at the end of that lap. Entrop finally got his four-cylinders-in-line job screaming again and made it back into fourth by the finish. But bridesmaid Hubert gained only second place trophy while Goehl got the important count.

The final title event was for C Hydros. Dub Parker of Gadsden, Ala., led for three laps but failed to get beyond that point. Bud Jones of Sioux City, Ia., moved from third behind Clyde Chaffee of Ligonier, Ind., into second when Clyde encountered problems and ultimately took over the lead in the fourth lap and went on to victory. Bill Tenney had provided the fireworks in this event, moving up from last starting position to seventh at the end of the second lap, fifth at the end of the third and a final third place finish position.

In the second heat, it was Tenney's race all the way, nosing Jones by 3/5 second at the finish line, but Jones

(*Continued on Page 35*)

THE NOA MODIFIED STOCK NATIONAL CHAMPIONSHIPS

At Corpus Christi, Texas

Good weather at Sunset Lake promotes a good turnout of Southern and Southwestern competition.

N.O.A. Modified Stock Nationals

At Corpus Christi, Tex., Oct. 5, 6 and 7, the N.O.A. Modified Stocks were treated to the first good weather break they have had in years. The setting was Sunset Lake under the Co-Sponsorship of the Corpus Christi Outboard Boat Club and the South Side Lions Club. Excitement occurred the day before the title gos were scheduled. Twenty-two-year-old Dave Christner, who already had won the A.P.B.A. Class B alky burner title and who was runner-up in N.O.A.'s A and B Hydro alky burner events, hit a submerged object while testing his hydro, flipped and apparently was struck by either the propeller or the fin of his boat. In either event, Christner needed fifteen stitches to sew up the wounds on his side and one leg, yet insisted on driving in the title events.

The first title race was for modified C Runabouts. Donald Johnson of Fort Worth, Tex., did an impressive job of working his way up from sixth spot to second at the finish. In actual scoring, Johnson won the heat as the first boat across the line driven by Dick Pond of Keokuk, Ia., had already been disqualified for jumping the clock at the start. Johnson put aside any doubts that he was destined to be champion when he moved from fifth starting position at the gun into the lead on the backstretch, beating his closest competitor, Bubba Haley of Blanchard, La., by .1-8/10 second in the second heat. Second overall position went to Tom McDaniel of Kingsville, Tex.

Class A Runabout turned into a record smashing event. Deanie Montgomery of Corsicana, Tex., record holder for the five mile distance at 41.667 mph, was given a real eye opener by Jimmy Epperson, Fort Worth, when Epperson with Konig power smashed the old record by more than 4 mph when he clocked the distance at 46.114 mph, though Montgomery was only .8 second behind him when the finish cannon was fired. In the second heat Montgomery drove like a man possessed with a determination to gain victory or flip in the attempt. This time Montgomery even surprised himself when he clocked an average speed of 46.392 mph, leaving

Kansas Johnny Jordan alternated firsts and seconds to take the NOA Modified Hydro title at Corpus Christi, Tex. He also set a new competition record with his Konig.

The Modified D Runabouts get under way at Sunset Lake after an initial false start during the Div. IV World Championships.

Epperson back in the traffic to finish fourth while Dick McCullough of Fort Worth, another Konig pilot, took second in that event. Montgomery took the crown, Epperson took second with a slim 2 point margin—527 points to 525 points over McCullough.

In C Hydro, Houston's O. B. Aylor took the first heat with no one within a quarter of a mile of him at the end of the race. The best Aylor could eke out of the second event was a sixth place position as Bubba Haley of Blanchard, La., despite clocking the course in nearly 16 seconds slower than Aylor had won the first heat, still was able to lead the second boat into the tape by nearly nine seconds to take the title with 625 points. Aylor, with a total of 495 points, was the second high scorer.

The final event on the first day was for B Runabouts. Deanie Montgomery with his Konig took the first heat, edging out Johnny Dortch of St. Louis, Mo., and Tommy Christopher of Granada, Miss., with Freddie Goehl gaining the second place point scoring when the latter two were disqualified for jumping the gun at the start. In the second heat, Goehl won his second national title for the year, running the five miles 1.8 seconds faster than Tommy Christopher. Montgomery took second honors despite finishing ninth in the second heat. The injured Dave Christner, patched up and in action finished third.

At 2:00 on Sunday, the final half of the N.O.A. modified stock title events got underway. Two women drivers had registered for the starting field. One, Gwyn McCullough, 17-year-old high school senior, had been disappointed when she qualified her A Hydro only to be disqualified in the inspection area when she and the boat proved to be 3 pounds under the minimum weight allowance. Johnny Jordan, Hayville, Kansas, former N.O.A. Division IV champion, took the first event for A Hydros in a new record time of 48.107 mph, breaking his own record which he had established on the same course in March of 1955. He was followed in for the checker by Deanie Montgomery, Corsicana, Tex., both drivers having their boats powered by Konig motors. Defending champion Johnny Dortch had a rough day, finishing sixth in the first heat and failing to finish the second. In the second event, the finish positions were reversed with Montgomery leading Jordan to the line, but Jordan's first heat speed gave him the necessary time advantage margin over Montgomery so that Jordan took the title.

The D Runabout event followed, with two sloppy starts, so that five of the drivers, including defending champion Dicky Pond, got the axe for their poor sense of timing. Gordon McDonald of Houston in a Mercury powered Ashburn won the first heat with Tom McDaniel of Kingsville, Tex., taking the second. McDonald was overall winner with a first and a third; second place going to Bill Talley, Jr. of Tulsa, Okla., with a third in the first heat and runner-up spot in the second.

The B Hydroplane events provided plenty of razzle dazzle for the fans, plus the added interest of seeing how pretty Gwyn McCullough would do against a field of eleven male competitors. Tommy Christopher won the event taking the lead away from Ed McCall, Lincoln, Neb., at the end of the second lap. Dieter Konig did some nifty helming by moving up from twelfth spot at the end of the first lap into third at the end of the second, though failing to better his position from that point on.

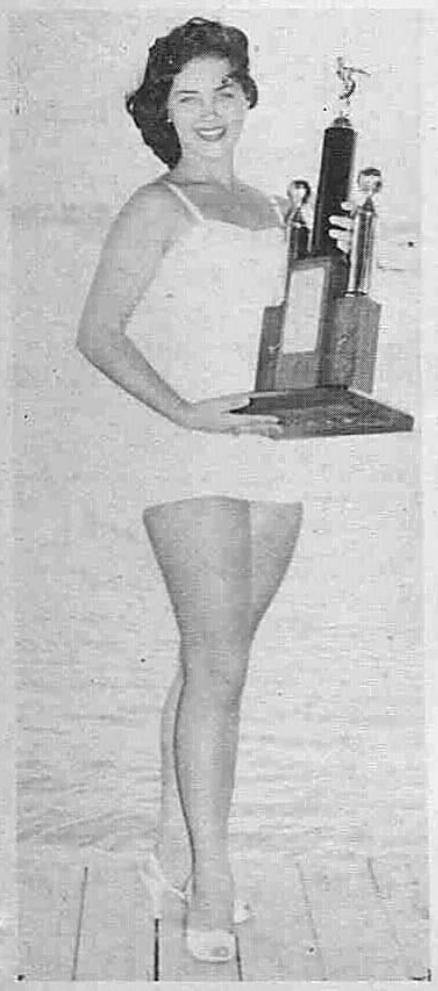
Gwyn had given a fair indication that she can drive with the best of the men, for though she was buried back in tenth spot at the start, she squeezed through a few holes up into eighth at the end of one lap, seventh at the end of second and managed a final fifth position.

The second heat was by far more exciting. Keith Sorenson of La Crescenta, Calif., who had abdicated his A.P.B.A. B Hydro title by a no-show, had his homemade black hull really scorching in the second heat, establishing a new record of 49.945 mph. But amazing to the crowd on the banks was the performance of the high school girl driver who again had gotten away to a fairly timid tenth position back in the jungle. Gwyn astounded the onlookers by picking up three positions in the first corner and then moving out into third spot coming off the last buoy of the second turn, tailing closely in Tommy Christopher's wake. A lap later Miss McCullough was firmly emplanted in second position and refused to give up her spot right down to the line. Freddie Goehl, meanwhile, was involved in a startling bit of action, when an unidentified boat flipped beside him, causing another boat to end over end and wind up on top of Goehl's own hull! Goehl continued for another 25 yards before he was able to push off the upended hull which covered him like a blanket and circle back to check on the condition of the drivers, who proved to be uninjured.

Tommy Christopher merging a first and a sixth took the title. Sorenson with a first and a ninth was runner-up.

(*Continued on Page* 35)

O. B. Aylor of Houston, Tex., in T-18 wining the first heat of the C Modified Hydros at Sunset Lake, Corpus Christi. He came in sixth in the second event, however, which dropped him back to the over-all runner-up spot.



Miss NOA herself, pretty Barbara Martin.

Gwyn McCullough took 3rd place and money in the B Hydro contest.

a CYLINDER, PISTON and RING PRIMER

By Hank Wieand Bowman

The basic steps to faultless compression when setting up your competition motor

The condition of pistons, piston rings and cylinder walls of competition motors will usually determine whether the motor will be a front runner or just a yard dog that will limp around at the rear of the pack.

Give a second rate motor a good set of cylinders and well set up pistons and rings and you'll give it a renewed spirit. The condition of all three of the above components will determine how well they seal the combustion chamber to prevent vaporized fuel on the compression stroke from escaping, blowing by the pistons, out through exhaust port passages, back through the fuel intake passages or directly into the crankcase. Poorly sealed pistons to cylinder walls reduce the volume of the induced fuel charge. This in turn results in power loss.

Expressed in somewhat different terms, it means that despite perfect carburetion and induction of the greatest volume of vaporized fuel by means of well-designed and (in the case of modified or out-andout racing motors) carefully polished manifold passages, intake ports and crankcase contouring, at least a part of the vaporized fuel will never be burned. For it will escape from the combustion chamber before the piston has advanced to the point of ignition. So the poorly set up group of components not only waste fuel but also partially nullify good design and and workmanship in the fuel induction components.

With this reduced fuel charge volume due to leakage, the manufacturer's carefully designed combustion chamber volume (which determines the compression ratio) has been altered, compression ratio has been reduced and with less vaporized fuel ultimately remaining in the combustion chamber, the energy produced by the fuel in pushing the piston toward the crankcase end of its stroke is also reduced.

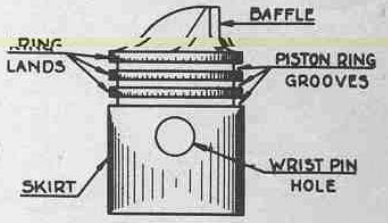
Since the burning gasses are attempting to escape by the simplest route, i.e., through the exhaust ports, intake ports or directly into the crankcase, and a poorly set-up group of components permits part of these gasses to escape before the piston stroke has uncovered the ports, then the energy that has already been diminished by the vaporized fuel loss on the compression stroke is further reduced by additional loss on the power stroke. There are even additional effects of a poor piston, ring and cylinder set-up leading to a reduction of performance—but there is no need to labor this part of the subject further.

The ultimate in perfection, of course, would be a set of cylinders so perfectly round that when mated with a perfectly seated set of rings and perfectly round pistons of just the right clearance, there would be no vaporized fuel leakage during compression and no burning gas leakage on the power stroke until the piston had reached that point in its travel when the exhaust ports were uncovered. This perfection, of course, never exists but every racing driver does (or at least should) strive for this ultimate.

Cylinders in outboard motors are of several types. They are either cast iron as in many of the earlier out-and-out racing designs, or aluminum with cast iron or steel sleeve liners as in the stock competition motors and modified stocks. The practice of the majority of the outboard racing alky clan has been to hard chrome the inner surface of the cylinders. This does not make the cylinder blocks any faster but it does prolong cylinder wall wear, since the hard chrome resists abrasion far longer than does cast iron.

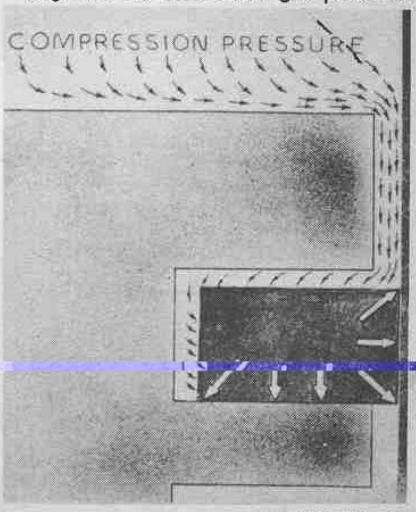
The amount and rapidity of piston, ring and cylinder wear is influenced by many factors. Chief among these are the quality of the fuel and the lubricants used in the fuel mixture, thoroughness in clean maintenance, proper cooling and a clean cooling system, a proper selection of the heat range of the spark plug which affects cooling, proper rod alignment, crank throw and bearing surfaces in good condition, proper wrist condition and cylinder walls free of scores and other faults. Added to all of these is the right selection of piston and ring fit and a good set of pistons.

The stock utility motors used for competition and the new out-and-out racing motors such as the Hubbell or the Konig are all properly set up (or at least can be assumed to be properly set up) by the manufacturers. However, the racer is concerned with replacing these components when wear



A typical two-cycle piston. Many racing pistons have only two ring grooves, rather than the three illustrated.

A cross-section of a piston and piston ring, showing the sealing action of the ring and the combustion gas pressure.



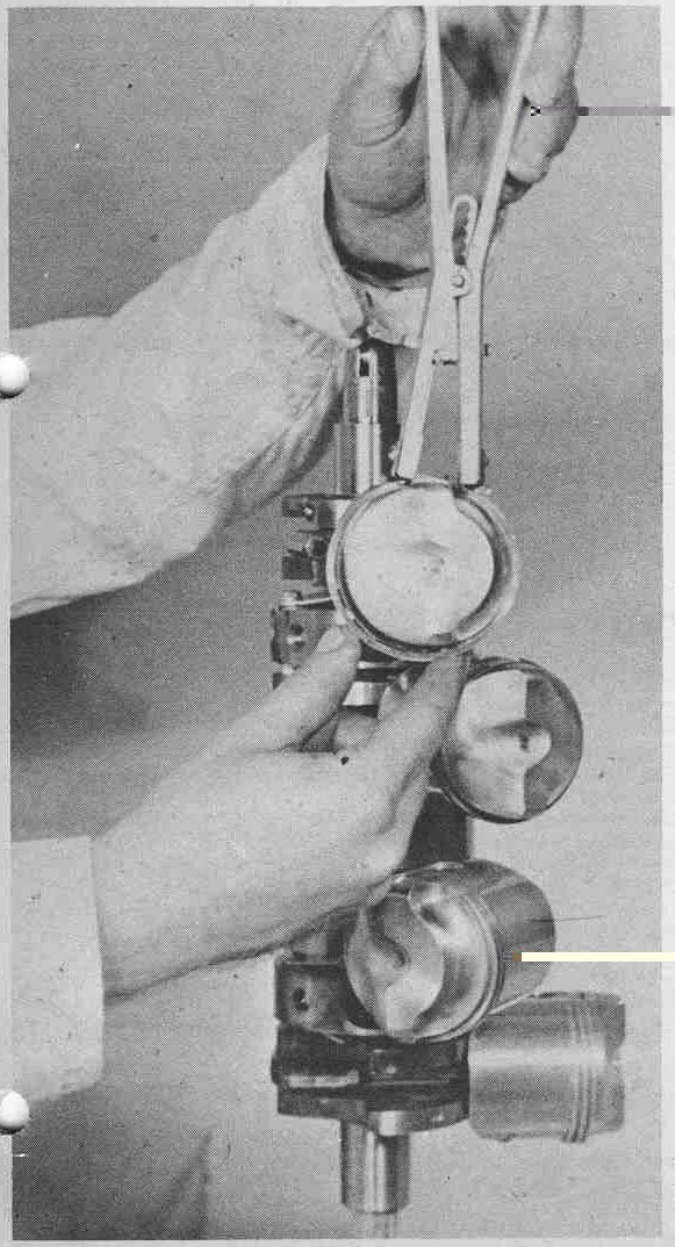
is noticeable. Here are a number of preparations, precautions and other tips to be followed that should prove helpful.

Piston rings used in a competition motor of any sort should above all have the quality of good conformance. The design and the material used in the manufacture of the rings must be such as to permit the rings to move slightly out of round within reasonable limits to mate with any lack of uniformity of the cylinder walls. Rings must be designed and fitted so that they do not create excessive drag and yet must have sufficient tension (that is, a tendency to expand) so as to retain a snug fit with the piston walls and resist the force of combustion gasses or vaporized fuel under compression from escaping either through the ring grooves or between the outer surfaces of the piston ring and the cylinder wall. They should also be fitted so as to reduce chatter and dance to a minimum.

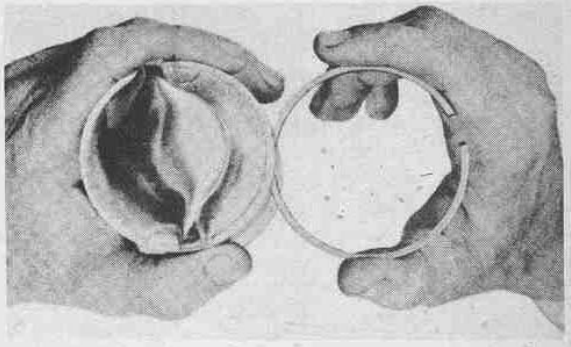
Piston rings are seated in ring grooves. There must be sufficient clearance between the rings and the ring grooves so that on the compression stroke the rings are forced downward snugly so that compression pressure escapes only as far as the top and the rear of the ring. The compression pressure itself pushes downward and outward effectively to force the ring into a sealing position. This can be seen in the illustration provided by the Perfect Circle Company showing compression pressures and their actions in a cross section view of a top ring.

As with all parts of the motor which are in moving contact with other parts, piston rings, pistons and cylinders wear. The face of the piston rings is gradually worn down, tension is lessened, the circumference of the ring is gradually diminished, the ring end gaps gradually increase and, after a bit, even the best set-up begins to leak excessively.

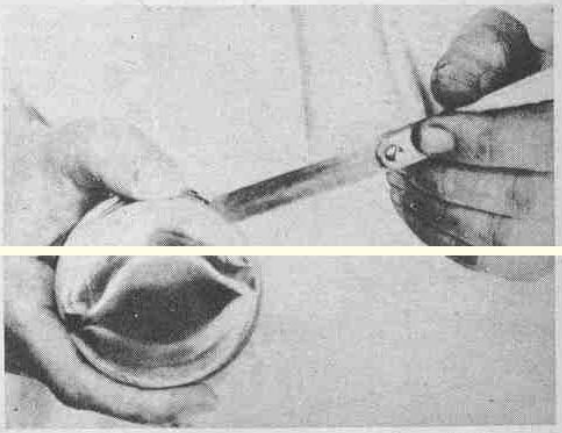
Usually the top ring receives the greatest wear, so the condition of the top ring is the most important. Some racers replace the top rings two or three times more frequently than other rings. The reason for excessive wear on the top ring is easily explained. Its location subjects it to higher temperatures and greater pressures than lower ring or rings. The greatest cylinder wear also occurs near the top of the cylinder for this same reason. The top ring groove is also more likely to become carbon-clogged, worn or deformed. When you consider that the



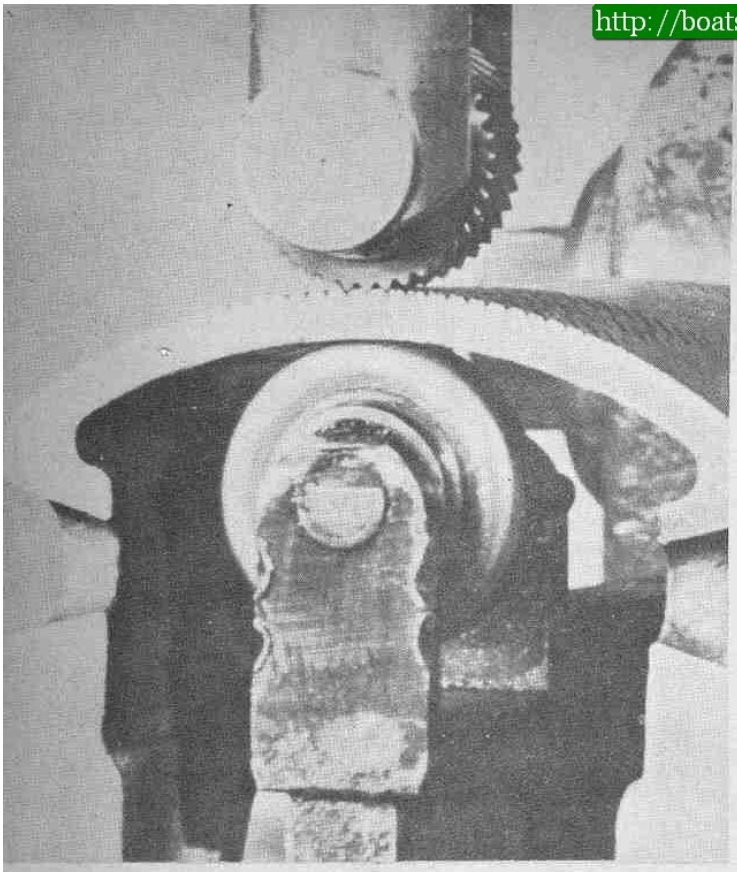
A ring expanding tool should be used in removing old piston rings or replacing new ones. Its use is demonstrated here on a four-cylinder Mercury cylinder assembly.



To check on the fit of the ring and the ring groove, use the method shown above. High spots and burrs bind.

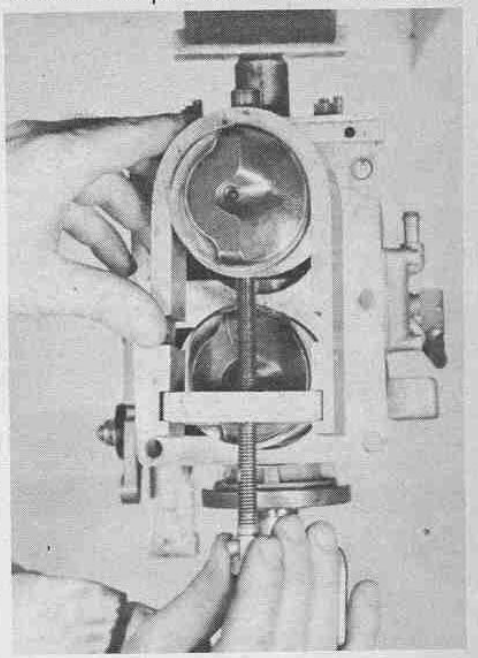


The clearance between the ring and the groove checked with a feeler gage. *Photo Johnson Motors*

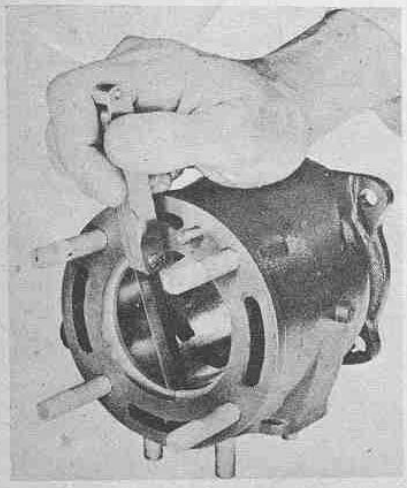


Left: The roller anvil of a Nurlizer, showing support needed to prevent collapsing of the piston while applying interrupted surface.

Below: Take care when removing wrist pins. Here is a special Mercury tool in use to remove wrist pins from a Mark 20H motor.



A CYLINDER PRIMER continued



How a feeler gage is used to check for piston ring butt clearance.

piston rings are sliding over cylinder wall surfaces somewhere between 1100 and 1500 times per minute, you have some idea of the tremendous potential for wear that exists.

As ring and cylinder wear occur, the metal lost on the two reciprocating surfaces acts as an abrasive to further increase the rate of wear. Here the alky burner driver has an advantage over the stock driver, since the chrome plated cylinder walls are about three and a half times as resistant to wear as grey iron.

The stock driver isn't permitted to chrome plate but he can use any type of piston rings. A number of the savvier drivers who want to retain their set-up in peak condition for a longer period of time use a hard chrome top ring or have all of their piston rings chrome plated. Remember, however, that chrome plated rings should not be used on hard chrome bores. There, only cast iron or iron-steel rings should be used.

Pistons also are subject to wear. It is a common practice for the racing driver to use a tapered piston with a lesser clearance at the skirt than at the crown. This is done because the crown of the piston is subjected to more heat than is the skirt and thus needs more expansion.

Some drivers have experimented with Nurlizing pistons. This is a process done by means of a knurling (toothed rotary) tool that displaces metal alternately by creating indents with the metal raising upward between the teeth of the knurling tool. Nurilizing should only be done by an expert who has the proper equipment to prevent any piston distortion and can control the diameter increase within a range of plus or minus .0005 in. It is done with several purposes in mind. One is to increase a piston's diameter in areas where, either through wear or original fitting, too much slop has occurred. The advantages that those who have tried this have found is that the interrupted, blunt, saw-tooth-like surface created is more resistant to scurfing and scoring since the indents carry an oil film which both cuts down on surface friction and makes for rapid cooling. The indents created by the Nurlizing process also serve as traps for the infinitesimally small fragments of metal so that their abrasive action is not exerted on the cylinder walls. Finally, the staggered surfaces, i.e., tiny valleys and hills, serve as expansion joints so that the metal can expand under heat without causing the piston as an entirety to swell in circumfer-

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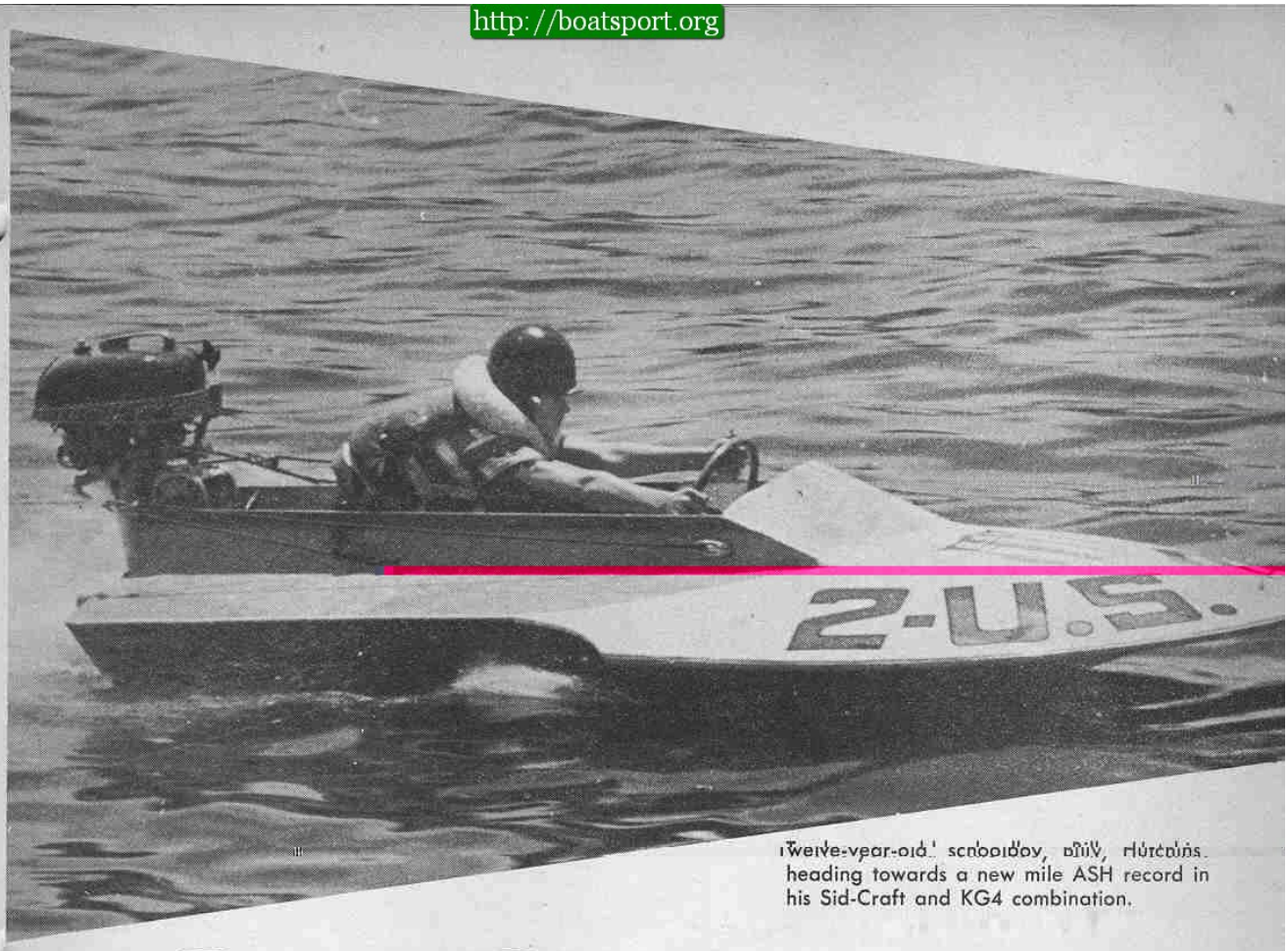


Twelve-year-old Billy Hutchins heading towards a new mile ASH record in his Sid-Craft and KG4 combination.

Record Breakers in 1957

MANY SPEEDS WERE TOPPED SO QUICKLY THEY NEVER GOT INTO THE BOOKS

Three new records (two that will go in the books) made Craig Dewald happy despite tough luck in competition.

New speedboat records during the 1957 season were hung up with a regularity. Some of the new speed marks proved to be short lived as new records were piled on top of only slightly older ones in such rapid succession that some will never gain official recognition in the record books.

One such new mark which shouldn't go without some comment is the ASH performance turned in early this summer by Billy Hutchins, a 12-year-old Miamian, who helmed a Sid-Craft powered by a KG-4 owned by Don Baldaccini over a mile straightaway on a canal five-miles west of Fort Lauderdale, Fla. The speed won't appear in the A.P.B.A. annual, since months before the season's end an 18-year-old Reading, Pa., driver who has already received national acclaim, Craig Dewald, scorched across a measured mile at Lake Quinsigamond, Worcester, Mass., at an average speed of 53.552 mph in a Mercury KG-4 powered Swift hydro.

Oddly enough, Dewald had badly damaged his own Swift in an accident

(*Continued on Page* 41)

Jane Smith established a new ASH record at Worcester, Mass., but it was erased from the books on the same day.

Testing a magneto for high resistance in the primary circuit with the new magneto analyzer. It will reveal whether the condenser is improperly grounded to the stator plate.

This new Magneto Analyzer is a sure cure for • •

MOST outboard racing drivers have had the experience of having their rig suddenly refuse to peak out to top rpm. It will get balky and leave them in the pits when the starting gun sounds—or just turn in a mediocre performance when the job was a real Sputnik the week before. You, your pit crew and the helpful stooges on the beach who always gather round when someone's hot rig suddenly turns lukewarm, all say, "It must be in the mag."

But *where* in the mag is always a big question.

It might be something as simple as ignition breaker points. But, with the idea of playing safe, you had installed a new set of points. The new point surfaces were perfect, the gapping checked out the way you have always set them, but the mag wasn't right. Unnoticed by you, the breaker point surfaces were slightly misaligned. This wouldn't be something you could be blamed for. Factory new points aren't always correctly aligned and a new set of points might even be worse than the slightly worn, pitted or burned points you took out and threw away. Misalignment of breaker point faces, as any race driver knows, will result in pitting, burning and premature wear.

Not as many drivers know, however, that a misaligned set of points despite perfect gapping may also change the cam angle with the breaker point opening, although the actual distance of movement between the points is the same. This is only one example of many possible minor mag troubles that add up to malfunctioning. How you are going to find out what is wrong is the problem? We think we have it licked!

Perfection in ignition set-up used to be hard to come by. It was accomplished pretty much on a hit and miss basis, which can be both expensive and time consuming. I know one alky A driver who as a matter of course would spend as much as ten to sixteen hours getting his KR ignition up to snuff and though his efforts usually paid off with the motor showing superior performance, that's a lot of time to invest in just getting a hot fire out of the plugs at the right time.

A weak ignition can make an otherwise going motor and an aggressive driver put on just as sick a performance as the stroker who tools around the course with a partially squeezed throttle.

Not long ago, I was working over the ignition of a stock motor that had been dumped. A lot of things can go wrong with an ignition system after a flip. Condensers which once were leak-proof and could hold their expected capacity in microfarads can suddenly go haywire particularly if the bath was in salt water. It's not necessary to know what this neat little electric term means other than if your condenser is rated for a capacity of .15-.19 micro-

The Merc-O-Tronic "electronic brain" shows you just where certain of your mag components are falling down on their jobs

Automotive type coils can also be tested for maximum amperage, surface insulation and the like.

• • • *Your Ignition Testing Headaches* •

By Shannon Place

farads, it won't be any good for your ignition if it doesn't check out within this range. A condenser that is over or under the rated capacity range for a particular ignition system will burn points quicker than a short order cook can incinerate a rare hamburger.

In the case of the motor to which we were giving artificial respiration after its session under water, we had used the usual approach of spraying it with carbon tet, checked it over to see that it was perfectly dry, cleaned and regapped the points and tried out the rig. It was as flat as a day-old omelette.

There's always been an old saying there just isn't a good condenser tester. I'd always held by this heory, despite having seen some busy looking pieces of ignition testing equipment which, with a slide rule and a witch doctor approach, were supposed to give the answer on conddensers good or bad.

With most of this equipment it was usually necessary to heat the condenser prior to testing to dduplicate engine operating conditions. Frankly such pieces of equipment almost invariably turned out dierent results with different operators at the controls. So, in this case when the mag seemed a bit sick, we had no choice but to try two new condensers. Still no good. Then we put in new coils. A bit better, but it was hardly a hot ignition.

About this time a Mercury dealer happened to stop by and suggested that we bring the motor over and check it out with a new ignition device he had. Up to this time, we had spent about six hours of actual tear-down and reinstallation work, not including tank and underway testing. We hadn't come up with much improvement, despite installing all these factory-new components.

In less than an hour's time with the borrowed ignition analyzer we had the dunked powerhead back in operation showing 800 rpm more in the test tank than it had ever shown before! Since we had had faith in our new parts, without the "electronic brain" and its complicated facade of busy looking dials and gauges which showed where certain of our mag components failed to stack up, we would have been looking for our troubles still.

The wonder box which cleared up our problems so quickly is a compact piece of equipment tradenamed the *Merc-O-Tronic Magneto Analyzer*. It is not just another coil tester or condenser tester but gives a complete magneto diagnosis, more thoroughly than any other piece of testing equipment I have ever seen.

For example, one of the first things it proved was that one of our *new* sets of points did not register in the OK block. It took three more sets of points before we found one that was OK.

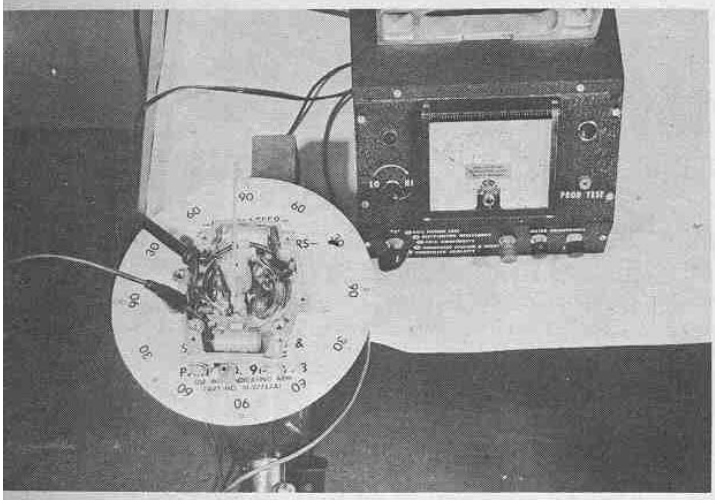
A NEW IGNITION TESTING AND ANALYZING DEVICE

continued

Next, we found that one of the new condensers was leaking. Out of curiosity I checked the two condensers we had pulled out of the motor and found that one of these was in perfect condition; the other shorted-out.

The new coils we had installed registered only fair, but the magneto analyzer helped us to find good ones. For the first time in my experience I had been introduced to an outboard motor test device that really did what it claimed it would do, accurately, quickly and simply.

The *Merc-O-Tronic Magneto Analyzer* was designed primarily for Mercury outboard motor service shops. After watching an ignition system checked out with one of these, I realized that it can be used equally well on any make of motor and should really fill the bill for the racing driver, no matter whether he is running a Mercury stock competition motor of some other manufacture, a modified stocker or an alky burner.



The instrument can be bought by anyone. It can be ordered through Mercury Outboard Motors, Parts and Service Division, Beaver Dam, Wisc. It lists at $99.50. This may seem like a lot of dough for a shop accessory but the racer might consider chipping in with some of his friends—or the racing club might make the invetment for the use of its members.

The instrument has the added advantage that the majority of the tests can be conducted without removing the magneto assembly from the engine or the parts from the stator and core assembly. However, separate ignition components can be checked individually. Here are some of the tests that can be conducted:

- Coils can be tested under actual working conditions while the coil is being fired at both high and low speeds.

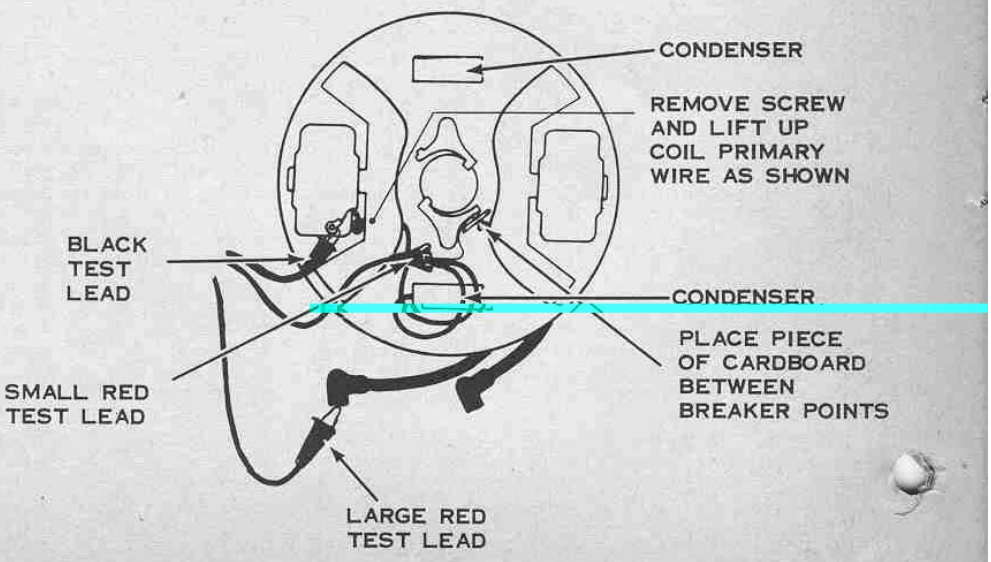
Additional coil checks will indicate accurately the condition of the coil's secondary winding for high resistance and will detect open or shorted out turns as well as dampness.

- The primary coil tests can be made to determine high resistance, shorted turns and proper grounding to the frame.
- High tension leads can be quickly checked for leakage.
- Battery ignition automotive type coils can also be tested.
- Condenser capacity checks can be made and the Merc-O-Tronic Mag Analyzer's operating manual gives a listing of condenser capacity range in microfarads not only fo those used in Wico, Phelon, Kiekhaefer-Mercury mags, but also those used in Elgin, West Bend, Scott-Atwater, Evinrude, Johnson, Briggs & Stratton, Clinton, Gale, Continental, McCullough, Kohler, Echlin, Fairbanks Morse, Bendix Scintilla and Eisemann magnetos. Coil specifications plus the operating amperage of the various coils and minimum-maximum range on the coil's secondry continuity are also listed in the manual that is part of the kit.

(*Continued on Page* 37)

Above: A handy accessory is the synchronizing and degree plate assembly used to give fine settings of breaker points by cam angles and to simplify point synchronization. It costs $2.85.

Right: This drawing shows the simple manner in which the leads from the testing device are clipped to various parts of the magneto without the need to disassemble the magneto in order to test its various components.



Around THE BUOYS

Bud Harvey of Chattanooga, Tenn., inspects the Scott-Atwater motor that J. C. Leatherwood used to win the EP class trophy at Gallatin, Tennessee.

Betty Seeger, able publicist for the Outboard Club of Chicago, sends word of the annual meeting of the American Power Boat Association's Region 7 at Barney's Market Club in Chicago.

Jimmy Jost of River Grove, Ill., was re-elected Region Chairman and director. Homer Kincaid, Carbon Cliff, Ill., was elected Outboard Chairman and director; Wally Broas, Menasha, Wisc., Stock Outboard Chairman and director and O. Birl Hill, Madison, Ind., Inboard Chairman and director.

Other new directors elected were Bill Byrne, Laur Gonia, Bob Seeger, Jack Maypole and Ed Sullivan of Chicago, Tom Schlutt and Gerry Waldman of Milwaukee, Howard Young, Calumet City; Chuck Mudge, Blue Island; Frank Kossow, Ottawa; Red Irick, Harvey; all Illinois, and Paul Meyer, Indianapolis, Ind.

At Gallatin, Tenn., the National Outboard Association conducted its first Division II National Championships for pleasure type boats and motors. At this first pleasure boat racing title event, only two classes were raced. One was Class EP for boats powered by motors of over 40 c.i. up to an including 50 c.i. on pleasure craft weighing a minimum of 325 pounds, at least 13 ft. long with 48 in. beam amidships and a molded depth of at least 15 in.

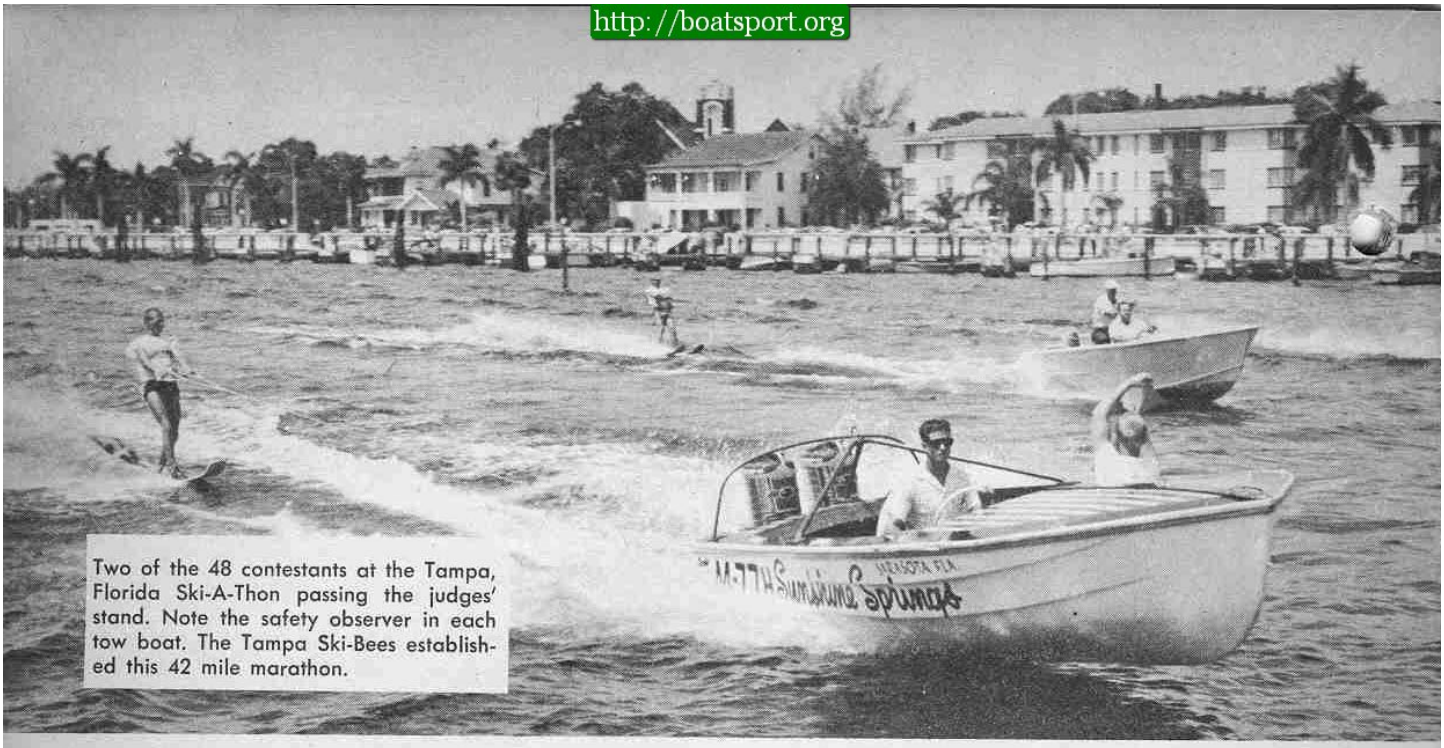
The winner of the EP class title was J. C. Leatherwood, Knoxville, Tenn. Leatherwood used a Scott-Atwater 40 hp motor. Second place went to Doug Cotton, Madison, Tenn., with third position won by Bart Llana, also of Madison.

In the other championship event, a free-for-all, open to any wholly unaltered combination of pleasure type motor and pleasure type boat, the winner was Paul Allison, Alcoa, Tenn. Howard Garvey, Madison, finished second and Charlie Ennis, also of Alcoa, third.

The contestants enjoyed the embryonic pleasure boating title events thoroughly, although fewer boats participated than were expected. Jim Whiteshield, Boating Editor of the *Nashville Tennessean,* who was partly instrumental in promoting the event, feels that the class holds considerable promise.

We would be inclined to disagree. We feel that pleasure boat racing has its greatest appeal as a club or small group function. There is already a broad selection of speed boating classes of varying types open to the would-be contestants to tangle skills on a nationwide basis.

C. R. Harra of Kansas City, Mo., with his home built, E. G. McCrea design No. 5111 Modified Stock Hydro. He's doing well with it.



Two of the 48 contestants at the Tampa, Florida Ski-A-Thon passing the judges' stand. Note the safety observer in each tow boat. The Tampa Ski-Bees established this 42 mile marathon.

Further, advertising such events as "outboard racing regattas" could have a damaging effect on all other racing classes. As a spectator spectacle, pleasure boat racing is dull as dishwater, bringing together ill matched equipment and unskilled personnel. Bored spectators will be inclined to view this sampling as typical of all boat racing and shun future events.

Let's keep the pleasure boat competition where it belongs on a local scale. Trying to crown a "national pleasure boat champion" is as meaningless as would be awarding the label of "national" stock car champion to the winner of a single home town backyard jalopy race.

Individual ski enthusiasts and ski clubs should be interested in a novel ski race sponsored last fall on the west coast of Florida by the Tampa Ski Bees. This organization established a 42-mile ski marathon race, seven laps over a six-mile course around Davis Islands in Hillsborough Bay in which teams and individuals competed in eight different classes, based on the horsepower of the towing boat.

Water skiers from Sunshine Springs Water Circus grabbed off top honors in this first local Ski-A-Thon, winning top team honors with individual wins in five of the eight classes plus first, second, third, fourth and sixth place trophies for the fastest overall time. The Tampa Ski-Bees placed second and the Cacci-Craft team of Tampa was third. Starts in the different classes were spaced out on a handicap basis with the lesser powered boats starting first. Each boat carried a driver and safety observer—the latter could relieve the skier.

Overall winner in an elapsed time of one hour 4 minutes 56.5 seconds for

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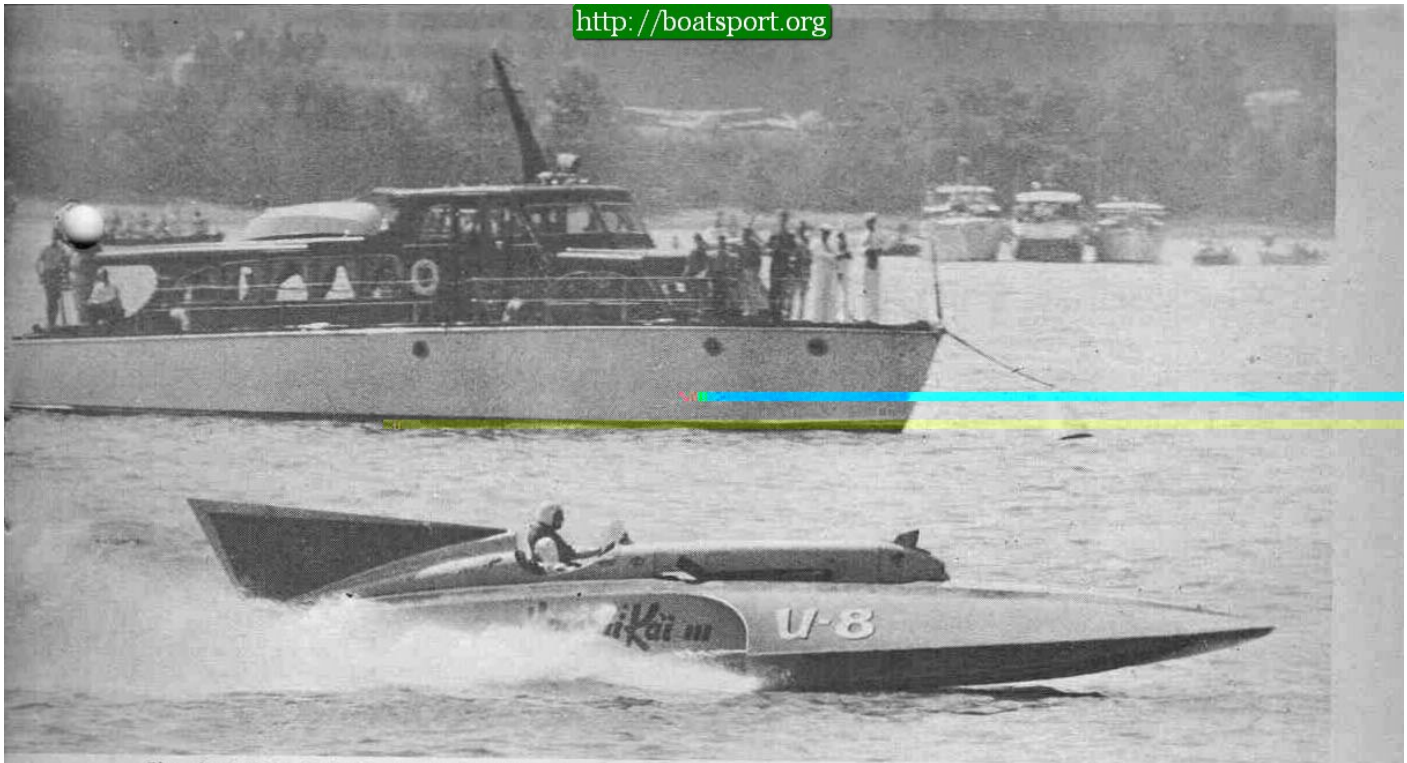
Stew McDonald, a Director of American Water Ski Association and President of the Tampa Ski-Bees (left) awards the overall winner trophy to Jim Rusing of Sunshine Springs.



The diminutive Jack Regas piloted the powerful *Hawaii Kai II* down the Potomac River to win The President's Cup.

Torque Talk

By Lou Eppel

A Peppery President's Cup

THE President's Cup Regatta at Washington, D.C. brought out all of the best Unlimiteds in the country, and the many thousands of spectators lining the Potomac River course on both days of the regatta were treated to the best unlimited racing possible.

The *Hawaii Kai III*, driven by Jack Regas, who looks more like an A Stock Hydro jockey than the top Unlimited chauffeur in the country, blazed around the three mile course to add the President's Cup to the trophy shelf already supporting such baubles as the Silver Cup, The American Speedboat Championship, and third place in the Mapes Gold Cup race and a fourth in the Apple Cup. Since winning the Washington events, Regas has scored wins in the Governors Cup at Madison, Indiana and the Sahara Cup at Las Vegas.

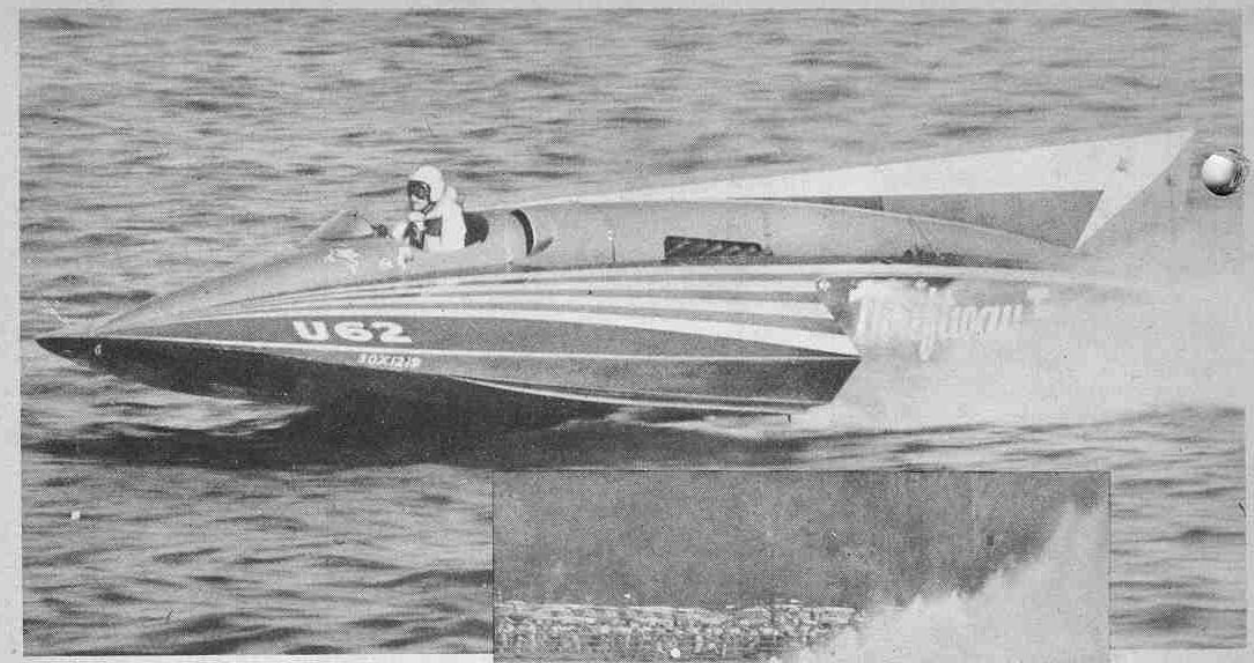
Every indication was given at Washington that if Regas could only keep the Packard Rolls Royce engine in one piece, he would take all of the Unlimiteds in the country into camp. The *Kai* was seriously challenged on a few occasions, but Regas stuck his foot deeper into it and the *Kai* became a thing of beauty as it roared down the straightaways at consistently better than 160 miles per hour—and it lost little in the corners.

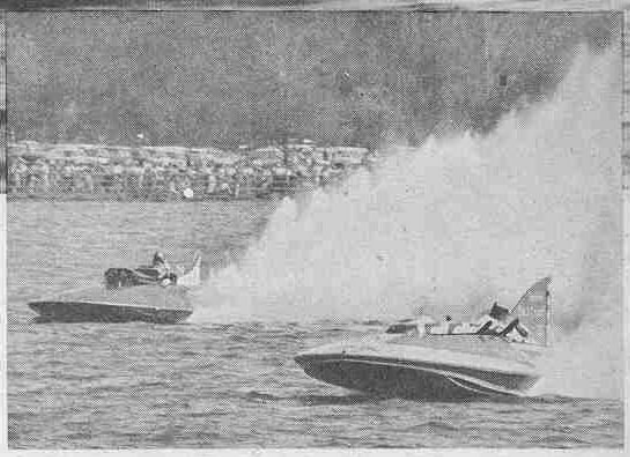
Bill Muncey in the Gold Cup winner *Miss Thriftway* showed the speed which again won the coveted Gold Cup in Seattle, but the *Kai* simply had it when speed was needed.

Willard Rhodes' second entry *Thriftway Too*, also looked good, but its lack of cornering ability was too much of a handicap to overcome. In the final heat of the President's Cup, the Detroit entry of Joe Schoenith, *Gale VI* with son Lee at the wheel, really gave the crowd a thrill by getting out in front and staying there for three laps. With the twin Allison installation really singing for a change, the big Number 6 seemed to be a new boat, and Lee's driving left nothing to be desired. A great sigh went up from the crowd, when the Gale, on the east turn went dead in the water having shed a propeller right at the strut. For a while during the final heat of the President's Cup the battle for first place was the most exciting we have ever witnessed, and it seemed incredible the *Gale VI* could wind up the season in a three way tie for 18th place in the Unlimited High Point scoring. We feel reasonably sure that now the Schoeniths' have found the combination in the six that they will concentrate on having the outfit receive all of their attention, rather than endeavor to keep two or three Unlimiteds in running order.

Bob Schroeder, well known limited hydro driver from North Tonawanda, N. Y. also did most creditably in the Washington races, at the wheel of the *Wildroot Charlie*, the former *Gale IV* which is now owned by a syndicate of Buffalo businessmen and carries the burgee of the Buffalo Launch Club. All the Charlie needs is some more horsepower, and the contemplated change from the Allison engine to a Rolls should do the job. This is a real hot combination of hull and driver, and next year should be a definite threat to the Unlimiteds. As a matter of fact, Schroeder and the *Charlie* amassed sufficient points during the season to wind up in the number two spot in point scoring with 1,421 points. The *Kai*, of course, took top scoring honors with the staggering total of 2,394 markers.

Bill Boeing's *Miss Wahoo*, with Mira Slovak at the wheel, gave great evidence of its great speed at Washington, but its inconsistency again kept it out of the winner's circle. Last year's High Point winner, Bill Waggoner's *Shanty I*, with Col. Russ Schleeh at the controls, became a cropper the morning of the second day of the races at Washington. It took off and came down, hooking a sponson,





Looking like something from outer space, *Thriftway Too*, (Above) the forward cockpit cabover creation of Ted Jones, showed great speed in the straightaways. She ranked 2nd. Right: *Such Crust III* (foreground) and *Shanty I* fought it out until *Such Crust III* developed supercharger trouble.

which at better than 150 mph is all that need be said. By great good fortune, Russ suffered no serious injury in the spill.

Probably the favorite boat, after the front running *Hawaii Kai III*, as far as the crowd was concerned was *Thriftway Too*, with its cabover design from the drawing board of Ted Jones. Looking like something from outer space, the *Too* showed great speed on the straightaways, in fact at one time, coming out of the first turn, and accelerating down the back stretch, the *Too* went by a Super Constellation just taking off from Washington's National Airport (whose runways parallel the course) as if the Connie was tied to the ground.

All in all, it was a great show for the Unlimiteds, and it is too bad for all of the other classes on the two day program that the big fellows so dramatically overshadow the performances of the hot limiteds and the speedy outboards. This year, the President's Cup had both quantity and quality, even if the spectators had eyes only for the Gold Cuppers.

Probably one of the nicest things which has occurred in the Stock Outboard racing division of the APBA was originally planned for Sunday, October 6th, but because of most inclement weather on the sixth the McClung Memorial Regatta was held on Saturday, October 12th at Perth Amboy, New Jersey.

This regatta, put on in memory of the late Bill McClung of Portsmouth, Va., who lost his life at the Stock Outboard National Championships at Worcester, Mass., with conceived by the Greenwood Lake Racing Club of Greenwood Lake, N. J. under the capable direction of club president H. C. "Click" Bishop and his hard working committee. Assisting Bishop were John Piper, Jim Ware, Whiff Wehrle, Sid Uretzky and Mickey Starego, as well as all of the club members.

All classes of stock outboards were scheduled and the entry lists for the original date were tremendous, with the obvious need for eliminations in all classes. Outfits from all of the New England states, as well as the Middle Atlantic states were on hand along with a few from Florida and Michigan. This was indeed a salute to a fine competitor. All of the purse, all of the entry fees, and all donations were given to McClung's widow by the Greenwood Lake group.

In order that no expense might be incurred in staging the regatta, and that the largest possible purse be donated, the sanction fee and the insurance premiums were taken care of by top APBA officers personally, and many stock outboard drivers who were unable to attend the regatta in person sent in their entry fees, regardless. In many cases a sizable donation was also included along with the entry fee.

We doff our hat to this group, as well as to all those who participated directly or indirectly in making the McClung Memorial Regatta an event which truly depicted sportsmanship at its best. *Salute!*

We had the delightful experience some weeks ago of meeting one of the most enthusiastic outboard drivers we have ever met in the person of Captain André Hubert of Paris, whose duties as a Captain of Air France on the New York-Paris run bring him to these shores regularly. Capt. Hubert is just one of a boating family, as his daughter and son both are pilots of racing boats in France, and their enthusiasm is unbounded.

(*Continued on Page* 37)

Dear Hank:

TECHNICAL QUESTIONS ANSWERED BY HANK WIEAND BOWMAN

The Kerosene Bit

Back in the August 1954 *issue of* BOAT SPORT, *there was an article about a four-point hydro by Brush. If this hull was so successful in its class, why aren't more seen? I am considering building a hydro on class D. Would this type be advisable over Hal Kelly's "Wetback?"*

As I am also purchasing a new Mercury 55H *this winter, I am wondering about the proper break-in for the engine. Should I follow Mercury's instructions, or try this running in kerosene bit? It has been the rumor around these parts that a much finer fit can be brought about by having the engine turn over while it is submerged in kerosene.*

D. K., Edina, Minn.

THERE ARE A NUMBER of successful four-point suspension hydros on the market at the present time. One of these is the Baycraft, which has turned very good results in competition.

If you are planning to build your own hydro, however, you would be safer to tackle a three-pointer and Hal Kelly's plans have done very well.

I'm a little confused as to the breaking in of a motor with kerosene. If rumor has it around the Minnesota area that a good way to break in an engine is to submerge it in kerosene and then turn it over, it is certainly news to me. Personally, I think I would avoid it. This notion sounds as far fetched as dunking your automobile in katsup.—HWB

The Wrong Evinrude

I am turning to you because three outboard motor mechanics have not been able to help me. I am trying to convert an Evinrude Speedifour model 7031 *for racing.*

So far, the only change I have made is in exchanging the original lower unit for one from an Elto Speedster, as this is more streamlined than the original.

My problem is that: at any speed above half-throttle, the motor seems to be starving for gas and it slows down and speeds up again every few seconds. By removing the front cover plate, it seems that when the fuel in the sediment bowl is used up, the jet into the intake manifold is greatly reduced. Would a larger carburetor help to overcome this? And where could I get information about converting this motor for racing? Where are the parts available?

R. L., Philadelphia, Penna.

MY BEST ADVICE to you would be to sell the motor and if you want to race a four-cylinder Evinrude, then pick up a racing 4-60 model 8006. This is a 60 cu. in. power plant rather than a 50 cu. in., and was originally designed for racing. It will need a minimum of conversion. You can buy a new one from Hubbell equipped with a choice of lower unit gear ratios for $515.

A less expensive approach, however, is to try and track down a model P500 Navy bilge pump. You may then get adaptable parts to convert it to a Class F alky burning racing motor from Randolph Hubbell, 2511 North Rosemead Blvd., El Monte, Calif.—HWB

More on the "36" Motors

In the story on "36" motors in your July 1956 *issue, you mentioned that a high compression head was used. I would like to know of somebody who manufactures these or could tell me how I can get a higher compression head to fit a motor of smaller horsepower. I am interested in getting a higher compression ratio from my present motor; a Johnson Sea Horse QD.*

R. F. Fort Blakely, Wash.

I'M AFRAID THAT YOU MISINTERPRETED my statement, or I was in error in my description of the "36" class motor.

The Johnson 35 was changed in its 1955 and 1956 versions. The cylinder blocks of these motors had a higher compression ratio than those made in 1954 and earlier years. The port timing and the reed valve were also modified, somewhat. You can get replacement blocks through any Johnson dealer.

However, keep in mind that if you plan to race in the "36" class, you cannot combine a 1954 or earlier lower unit with a 1955 or 1956 power head.—HWB

Finding PSI

In talking about outboards, we were wondering what the compression pounds per square inch were in different motors. If there is such a rule, I would appreciate it very much if you would tell me what are the pounds per square inch in a Scott-Atwater 16 *hp.* 1950 *and a* 1956 *Mercury Mark* 30.

A. B. B. Jr., Cut Bank, Montana

THE SIMPLIEST WAY to find pounds per square inch in different motors is to put a compression gauge into each spark plug hole, rope over the motor and take a reading.

The result is going to vary cylinder for cylinder and the pressure is going to be based on the condition of the pistons, rings, and cylinder bore rather than on any rule. The more perfectly round the cylinders, the more accurately set up will be the pistons and well-seated the rings—and the better compression result. A poorly set up piston and ring rig (or a scored or badly out of round cylinder) will result in decreased pressure.

An outboard motor in good condition should pull 75 lbs. or better. One that is going to win races will pull well over 100 lbs.

There are variables, however. A sloppy set-up in a cold motor may not be considered sloppy in a hot motor. Reversely, a cold motor which seems to pull good compression may work out of shape when it is heated and lose its compression seal.—HWB

Converting KG-7H to KG-4H

In the October 1957 *issue of* BOAT SPORT, *there was a question; "Can I use a sleeved down KG-7H for Class A competition?" You said "No!"*

Since then I have heard from other sources (including the Kiekhaefer Corp., D&D Bull. No. 186) *that you can change the block and pistons for those of the KG-4H and race it in A class. Is this true? Is there any way to have the KG-7 block sleeved down at the factory? Do you have to change anything else? Is the motor slower, as fast or faster than the KG-4H?*

C. H., Cranford, N. J.

YOU'RE PARTIALLY RIGHT AND PARTIALLY WRONG. You cannot sleeve down KG-7 blocks for use in Class A competition. What you can do is use a KG-7H motor, complete ignition, flywheel, case, rods, drive shaft unit, bracket, etc.—but you must replace the cylinder blocks with a set of KG-4 blocks part No. 10-367.

You will also need a piston, pin, ring, assembly, a new cowl, serial plate and tank protector rim. With these parts, you can convert over the KG-7H to a KG-4H and the motor should prove every bit as fast as any of the original KG-4H models.—HWB

(*Continued on Page* 40)

The APBA Stock Outboard Championships and The Mennen Century

(*Continued from Page* 11)

turn barely nosed out Dave Denelshock, Pennsville, N. J., who had scored 525 points with a third and a second. Defending Champion, Ed Branding of Lake Villa, Ill., was snowed back in overall eleventh position in the extremely tight and hard fought competition in the class.

Craig Dewald of Reading, Pa., favored to take the AU events in view of his 1957 competition consistency and a new record through the mile, proved that there is no such thing as a sure bet in an outboard race. He flipped in the first turn of AU and suffered considerable damage to his Raveau hull. This also wrecked his chances in BU since he uses the same boat for both classes.

Billy Schumaker and Bill Sampson of Akron, Ohio, were axed for jumping the gun as Dean Chenoweth of Xenia, Ohio, the defending champion clocked 39.560 mph to take the heat from second place finisher Ron Hill of Bellflower, Calif., with a 2.2 seconds advantage.

In the second heat Roger Hoffman of York, Pa., who had driven his Merc powered Sid-Craft *Wendy-Lynn* to third position in the first after a middle of the pack start, moving up from sixth at the end of one lap, took the second heat at a 39.964 mph speed.

Chenoweth, who placed second a full 6 seconds behind Hoffman, however, earned the title, 700 points to Hoffman's 625, when Dave Keizer of Concord, Mass., who had been the actual second boat to finish in the second heat was disqualified. This did not change the ultimate positions for even if Hoffman and Chenoweth had finished up in a point tie in the two heats, Chenoweth had scored the lesser elapsed time. Chenoweth's victory was the first successful defense of a title for the year.

When the BUs came out, defending champion Dave Kough of Hawthorne, N. J., appeared definitely to have things in the bag for he romped home in the initial heat with a 3.7 second margin over second place finisher, Jim Grant of Columbia City, Ind. Kough's speed of 46.249 mph looked right good but in the second heat, he was buried in the middle of the field back in eighth spot through the first lap, then ran into mechanical difficulties and failed to finish. The ultimate winner, Jack Hall of Pittsburgh, combined his first heat fourth with a win in the second heat to take the title. Ed Bradby of Lancaster, Pa., scored two thirds for an overall second while the ex-title holder wound up with a third place trophy.

In CU Bob Ross, Birmingham, Mich., averaged a fast 45.569 mph to top another Michigan racer, Johnny Ennenga of Grand Haven by .6 second. In the second heat, Ennenga was clocked at 45.895 mph to take the checker and the title with a total of 700 points. Ross finished fourth to score runner-up standing, while the defending champion Jon Culver of Dayton, Ohio, merged a sixth and a third for an overall fourth, third spot going to Ed McCourtie of Michigan City, Mich., to make it a grand slam for the Michigan contingent.

In the second heat, an unfortunate accident occurred in the jamming at the first turn when Jim Burnham of Conneaut, Ohio, flipped and was hit by an unidentified following boat. Jim suffered severe lacerations of the right upper arm. Prompt action on the part of one of the competitors, Tommy Von Mello of Marion, Mass., may well have saved Burnham from much more serious injury. Von Mello, without hesitation, scooped the injured driver into his boat and rushed him to shore. Burnham was discharged from the hospital after several days and reports had it that he would suffer no permanent injury.

In DU Skip Forcier helming his Sid-Craft *Sunburst* scored the most decisive victory of the championships, winning two straight heats. Gerry Waldman, Milwaukee, Wisc., offered Forcier his toughest competition in the first heat and Jim McCombs of Niagara Falls, N. Y., ran second to Forcier in the second heat. Waldman with fifth and second place finishes, however, took the runner-up spot with 427 points as the 1956 National Champion, Johnny Jackson of Cincinnati, Ohio, took third with 394 points.

The racing had been excellent despite the gradual switch from overcast to rain and a low hanging fog that cut down the drivers' vision in the final utility events. Though all the championships had been scheduled for Sunday, a steady downpour finally forced the officials to postpone the races after the running of the DU class.

More bad weather for the ASH

The following day was, if anything, even more miserable as the ASH class boats moved out onto the course. In the initial start, one of the standouts, Jane Smith of Ridley Park, Pa., jumped the gun and blasted her hopes of taking the title. In the restart, Craig Dewald, who came into the Nationals with the equipment and the driving skill needed to place up in front in two or even more classes, again had the whammy sign on him when he spun out in the first turn and finally got underway again in a bad last position with half the backstretch separating him from the tail-end boats. Still, Craig drove his record holding straightaway rig up to a final tenth place finish. In the meantime, Dave Hoggard of Trenton, Mich., had scored a victory at an average speed of 43.103 mph, not particularly hard pressed by the former national title holder Dean Chenoweth, who finished nearly 11 seconds behind Hoggard.

In the second heat of ASH, Dewald proved beyond a doubt that he had the fastest A Hydro at the Nationals, moving up from a middle-of-the-pack position to third at the end of one lap, second at the end of two and finally moving out in front of Canadian John Webster at the end of the third lap to take the event with 3.1 seconds to spare. However, Hoggard with a sixth in the final heat scored 495 points, enough to take the title from Chenoweth with a second and a fourth for a total of 469 points. Those 400-point wins make a tremendous difference.

In BSH, title-holder Dave Kough blew any chance of a repeat when he along with nine other drivers were disqualified for jumping the gun on the restart. Ed Sonoras of Newport, Mich., in one of the most beautiful handling boats that appeared at the entire race meet (a homemade job owned by Paul Kalb, Monroe, Mich.), averaged almost 50 mph to lead the pack home for naught, as sixth place finisher, Chris Erneston, Jr. of West Palm Beach, Fla., who had started

right on the button and was the first of the four legal starters, grabbed off 400 points. Phil Van Syckle of Battle Creek, Mich., took second in the initial go around.

In the second heat, Jim Derr of Lincoln Park, Mich., was the first of the BSHs to complete the three laps but he established a somewhat dubious record, for he had beaten the clock for the second heat in succession and been disqualified. Bob Tod, Schenectady, N. Y., won the heat but he, too, had been one of the offenders in the first go, so that his 400 points gave him only runner-up position to the new champion Chris Erneston, who had moved up from fourteenth at the start to a seventh place finish. The total of 471 tallies gave him the crown.

A great tragedy

DSHs were next on the schedule. Coming down for the start of the first heat, Dave Thomas of Miamisburg, Ohio, cut across the front of the entire field, nearly flipping Bill Janz of Chicago and causing a number of the other boats plenty of trouble. The offense apparently went unnoticed on the officials' stand, for there was a recall on the start with Bob Immel of Madison, Wisc., disqualified for clock jumping. On the restart, Wild Bill Holloway of Tipp City, Ohio, driving *My Baby IV*, broke into an early lead and averaged 54.811 mph with Mickey MacDonald of Kalamazoo, Mich., taking second spot more than 8 seconds behind the 1956 Champion. Running third in the initial heat was Bill McClung of Portsmouth, Va., who had been the 1956 CSH Champion.

In the second heat there was a false start as Jim Coutts of North Tonawanda, N. Y., jumped the gun. On the restart, tragedy struck the race as ten of the DSHs barrelled into the first corner. Bill "Buck" McClung broached, was struck and knocked from the cockpit of his boat which then overturned. Bill was hit again by another boat when he was in the water. McClung did not recover from the serious head injuries he suffered and died later that night.

On the restart of the event, Holloway went into the first corner third and with fine competitive driving, moved into second coming off the fifth buoy and took over the lead on the backstretch. His average speed in winning the second heat was 55.147 mph.

Two 1956 Champions had successfully defended their titles. Nine other new Champions had been crowned. There was a decided feeling among the drivers after all the events had been completed that sixteen boats competing at one time at the present speeds and high caliber of competition are too many. Certainly this was a contributing factor, if not the cause, of the large number of cornering flips in the first turn at this year's stock outboard national events. It is thought that a change in the rules to cut down the large fields will most assuredly go into the rule book for 1958. —B.G.

The NOA Alky Champs

(*Continued from Page* 18)

with a first and a second in his Mercury powered rig had topped Tenney's third and a first; 700 points to 625.

The final two events on the program were not championship races. The first, a free-for-all runabout race, was a fairly dull affair with only three entries and no position changing. Buck Kaufman of Sioux City took the Tatum Trophy. Mel Kirts of Elkhart, Ind., pressed hard by Dieter Konig, won the free-for-all-hydro Fox trophy. With that the rooster tails died and there was silence again over the Wabash Valley.

Though spills were too numerous to record, none were caused by the interference of pleasure craft due to excellent patrolling and no serious injuries were incurred. —B.G.

The NOA Modified Stocks

(*Continued from Page* 20)

Gwyn McCullough's consistency didn't pay off quite as well, for her fifth and second place finishes gave her a total of 427 points, thirteen less than Sorenson's score, but she did have the thrill of winning a third place trophy in one of the big events of the year.

The final event of the day was for D Hydro. Two of the boats flipped while circling for the start of the initial heat, which was taken by Bud Jones, Sioux City, Ia., with second going to Donald Johnson. In the second heat, Freddie Goehl came in first but the title winner was Jones with a first and a sixth for a total of 495 points and his second national title. Freddie Goehl had only 400 points for, while running in third spot in the initial heat, he had encountered motor trouble and dropped out. —B.G.

Dear Hank:

Questions on motors and boats in the outboard racing field are answered by Hank Wieand Bowman personally by letter.

Queries of general interest are printed in BOAT SPORT from issue to issue.

Address yourquestion s to—

Dear Hank:
Boat Sport
215 Fourth Avenue,
New York 3, N. Y.

and enclose a stamped, self-addressed envelope for your reply from Mr. Bowman.

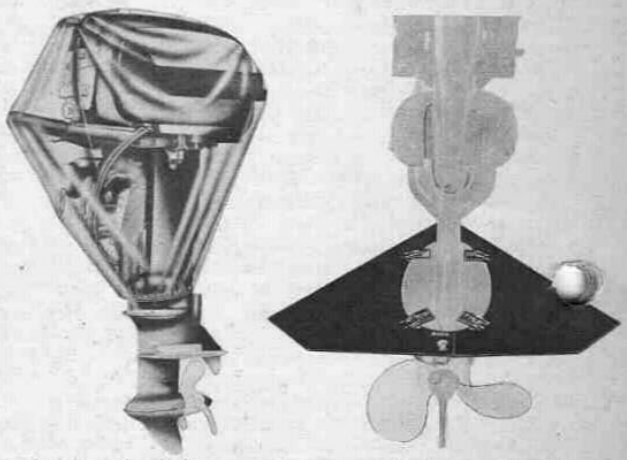
BOAT SPORT BOAT SHOW

ALUMINUM MARINE HARDWARE CO., Inc., Auburn, N. Y., announces a series of new Nautalloy outboard racing fins, with 2" wide flange, 4½" deep. They are available in a number of models: 12½" long polished, $3.95, satin finish, $2.85; 10" long polished, $3.65, satin finish, $2.50 . . . Lafayette Supply Company, West Lafayette, O., has introduced an item that the "36" class racer should be interested in, a carburetor throttle control adaptor which can be fitted to any standard flexible wire throttle control cable and spring loaded racing throttle. The item lists at $5.00.

THE LAFAYETTE BILGE PUMP, 24" long, 1½" in diameter with 4" long spout will pump more than 10 gallons a minute and is a handy item for marathoners whose boats aren't equipped with automatic bailers. It's a product of the Lafayette Supply Company, West Lafayette, Ohio . . . On a smaller scale, there's a tough, long lasting jumbo cellulose sponge that can't be damaged by oil or grease and absorbs a quart of water at each soaking. Ideal for the racing driver's pit stooges, the Boat Bailer, a product of Burgess Cellulose Company, Freeport, Ill., lists at $1.44.

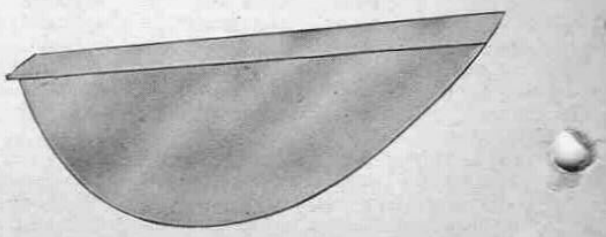
STERLING PRODUCTS CO., Inc., St. Paul 1, Minn., manufactures a waterproof polyethylene-plastic motor cover that sells at $2.50 for small motors and $3.00 for medium sized motors—just the thing to protect your racing equipment from dust in your trailer box . . . The Lumex Model 101 outboard motor stand simplifies storage and repairs for the home shop hobbyist. A product of Lumex, Inc., 11 Cleveland St., Valley Stream, N. Y., this simply constructed, durable, polished aluminum, non-tip stand lists at $6.50.

If your bailer won't work, try this 2 ft. Lafayette bilge pump.



Sterling's polyethylene motor covers (Left) are durable. Right: The Jagiel Stabilizer for motors 15 hp and up.

DEW-COATED, specially refined and blended two-cycle oil is formulated for self-homogenizing with fuels so that it will not separate when once mixed. One quart of Dew-coat is sufficient for eight gallons of fuel and its superior capillary action and strong film strength is claimed to offer higher rpm, eliminate carbon and varnish deposits and ring gumming. It sells for $1.50 a quart or 85c a pint, or in five-gallon quantities at $5.00 a gallon . . . The Bowen Mfg. Co., Villa Park, Ill., has come up with a handy gadget for the race driver, a red plastic filtering funnel with permanently-sealed-in stainless steel screen which is unaffected by either gasoline or alcohol, won't rust or corrode even if used with acids and solvents and will float. In one-quart size it lists at $2.25 or $2.75 for a two-quart size.



The Nautalloy racing fin is 4½ in. deep, with 2 in. flange.

The Boat Sport Boat Show (continued)

THE JAGIEL RESEARCH AND DEVELOPMENT CO., 3106 Algonquin Parkway, Toledo 6, Ohio, is marketing the Jagiel Stabilizer, constructed of 14 gauge galvanized steel at $9.95. This easily attached device is claimed to permit outboard motors of 15 hp and up to turn in their own boat length at full throttle without capsizing, to eliminate cavitation, pounding and drift in turns, minimize spray for ski towing and increase speed, power and planing ability plus reducing vibration to a minimum.

The New Magneto Analyzer

(*Continued from Page* 28)

The *Merc-O-Tronic* black box can also be used to check condensers for leakage of insulation; for shorts; points can be checked for leakage—and the gadget can even be used to test spark plugs for fouling from oil deposits. Further, the instrument can be used to accurately set the timing of all motors with any number of cylinders. In essense, it is a real electronic brain.

Just what goes on inside the testing unit isn't of any particular importance. It is equipped with a motor, 7½ volt batteries and also a plug cord for 115 volt, 60 cycle, AC current, which is used during condenser testing. No special knowledge is needed to use the magneto analyzer. The operating manual is clearly written and gives simple instructions on how to conduct tests and read the results.

At a later date, BOAT SPORT will carry special ignition tune-up, step-by-step demonstrations with pictures illustrating how the instrument is used with various types of stock, modified stock and alky burner ignitions plus data on before and after tank and underway performance. ●

Torque Talk

(*Continued from Page* 32)

The most popular class over there is comparable to the "36" stock outboard class in the APBA and races are held almost every week somewhere in France for these boats. We thought it would be great sport to contemplate going to the Riviera for a regatta, then to Paris; later to the North of France and then back to the French-Italian border for still another regatta. These names make one most anxious to futher international relations by journeying abroad to compete, as did Bill Tenney at the time of the Monaco nuptials.

According to Capt. Hubert, Bill Tenney became a great favorite with the French people, and they all felt extremely bad that he suffered such miserable luck and such bad weather conditions. ●

A Primer of Cylinders, Pistons & Rings

(*Continued from Page* 24)

as an entirety to swell in circumference. Those who have used Nurlized pistons have found that they can fit their piston skirts far more closely than with a piston that has not been knurlized. However, any race driver planning to do this should carefully check the rules of his sanctioning body to see if the practice is permitted within the club's rule structure.

Clean piston grooves are just as important as good rings. When replacing piston rings, a ring tool should be used to remove the old rings to offset the possibility of scoring piston ring lands —the area between the grooves. The grooves should be scraped completely free of carbon, lacquer and metal deposits. A simple tool for this purpose can be made by filing the broken end of one of the old rings. If the lands of the pistons show any chips at the ring groove edges, particularly on the lower edge, the piston should be regrooved or replaced with a new one.

Cylinder walls should be checked for trueness. This is most readily done with some type of dial indicator that can be slipped in and out of the cylinder hole along the area of piston travel. If the cylinder is found to be in fairly good condition with no bulges and hollows, minor scores can be removed by use of a hone. Keep in mind, however, that a hone does not straighten a crooked or warped cylinder. It is used only to correct minor scrapes, scratches and flaws on the cylinder wall surface and to increase the diameter of the hole slightly.

Hones vary considerably in grit size. Since you will probably be resorting to one that you can borrow from a local garage, the range will fall somewhere between 180 and 300 grit size. Select a stone with the larger grit number since the higher the grit number, the less coarse the stone. Do not use the hone dry. Use it with a cutting oil which will give a smoother finish to the cylinder bore. Don't overwork the hone. About a dozen strokes should clean up any imperfections that can be handled by a hone. A cross hatch type pattern can be achieved by stroking rapidly.

After the cylinder has been honed, the side walls will be coated with abrasive particles and these must be cleaned away. Dipping the cylinders completely in a solvent such as Gunk is okay as a first step. But always rinse the cylinders thoroughly with warm water and soap and finish your clean-up with a pad of clean cloth saturated with light engine oil to remove any residual abrasive particles. Finish by wiping the cylinder bores with a clean white cloth using a supply of fresh cloths until finally a cloth can be pushed through the bores without picking up any dirt.

Rings should be those that meet the original manufacturer's specifications as to diameter, since a certain amount of clearance must exist between the ring and the grooves. Be certain that the rings are pinned in a staggered manner so the butts are not in line with either exhaust or intake ports. Unpinned rings are strictly for the birds and eventually—sometimes very rapidly—will either chamfer the edges of the ports or have their own edges chamfered. Leakage or ring breakage will result.

In fitting rings, follow the end clearance recommendation of the manufacturer. If none is listed, use a butt clearance of about .007 in. give or take .001 in. To check on end clearance, push a ring into a cylinder vertically and then rotate it inside the cylinder to a horizontal position. Insert a piston on top of the ring, pushing the ring an inch or so into the cylinder hole to insure an accurate horizontal placement. Then check the gap with a feeler gauge.

Checking cylinders

You can use this same method to check the taper of the cylinder wall or even check for bulging if you have no dial indicator by gradually pushing the ring with the cylinder skirt down the inner surface of the cylinder at the same time taking frequent checks of the gap with a feeler gauge. If excessive taper, humps and hollows are noted in the cylinder, it's well to have the cylinder rebored or preferably ground.

Since some piston rings have a tapered face, be sure to install them with the proper leading edge upward. The taper on the ring face should slope outward from the crown of the piston toward the skirt. When seated in the ring groove, the higher face should be at the bottom of the groove. Tapered faces are used to permit rings to seat more quickly. In actual practice, the taper is worn away, or nearly so after the break-in period.

If the modified racer has his cylinders bored oversize and plans to fit oversized pistons, keep in mind that if compression blocks are installed in the cylinders (a common practice to boost compression ratio) the heat of the heli-arc welding is likely to distort the cylinder walls. Better have the boring job done after any welding. Rebore jobs on the part of hop-up specialists usually cost in the neighborhood of $3.50 to $5.00 a hole.

Any old pistons won't do, just because they're oversize. Check around, do some inquiring of the other drivers and have them recommend pistons that have been proved to have low expansion characteristics.

Keep in mind, too, that the piston and the piston rings serve an additional purpose, of being an important part of the engine's cooling system. Well designed pistons will dissipate

heat quickly to the cylinder walls which in turn will conduct the heat to the circulating cooling water. A cheaply constructed piston may have thin sections in the crown which will restrict rapid conduction of heat. Again, this is advice to buy pistons that have proved efficient in front running motors.

Since all metal will expand when heated, many drivers have learned through experience that the greater expansion normally occurs in those areas of the pistons where the wrist pin is inserted, i.e., across the line of the wrist pin boss. The reason is simple: there is more metal at this point to expand. Many drivers either cam grind off or with a piece of emery dress off about .001 in. or less on the side of the piston at this area. This reduces the possibility of excessive friction at this point. Some drivers even go a step farther. With a pointed tool, they create a cross hatch pattern; then knock off the high spots with crocus cloth so that the criss-cross scribe marks carry additional lubrication.

Cutting ring grooves

Various theories exist concerning relative depth of ring grooves and rings and also the amount of side clearance in the grooves. Personally, I feel that if one buys pistons without ring grooves and plans to cut his own grooves on a lathe, the groove should be .012 in. to .015 in. deeper than the thickness of the ring to be used. This added depth permits a cushion of oil under the ring to give a more effective seal and to offset ring dance or vibration during motor operation. The groove itself is usually cut to the same width as that of the ring. Then the rings are placed on a lap—a section of heavy plate glass or mirror will do the trick—and both sides of the ring are lapped down with a paste of machine oil and fine valve grinding compound or a scouring powder, until they are perfectly flush and offer between .001 in. and .002 in. clearance.

For the racing driver who can select his ring width, a thin 1/16 in. width standard ring will prove just as effective a sealer and its surface will wear just as well as ⅛ in. width rings. Yet, with its reduced weight and same ring tension, less ring dance or vibration will occur and a better seal will result. Also the narrower ring will reduce frictional heat.

Achieving static balance

Static balance of piston components can best be accomplished by the stock driver (who is not permitted to remove metal on any parts of a model accepted for racing after January 1, 1954) by weighing the various components and by shifting rods and wrist pins to accomplish the closest weight balance possible. The modified motor driver or the racer of an out-and-out racing motor is allowed to remove metal for balancing, providing, of course, he meets any minimum specifications set up as limits on the components. Good static balance, naturally, is desirable and the alky burning driver should take every advantage permitted within the rules to see that the components balance accurately in weight.

Since greater heat will be created during the break-in period of a new set of components, pay particular attention to the spark plug heat range. Do the break-in slowly and vary the speed from time to time. Four or five hours of medium speed operation are required to thoroughly limber a new set-up. ●

Classified Advertising

Use this directory for prompt response. Rate 20c per word ($3.00 minimum). CASH WITH ORDER. 5% discount for three or more insertions to direct advertiser. Copy should be on one side of the sheet and typewritten, if possible. Schedule of closing dates for classified advertising as follows:

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June	Feb. 20	December	Aug. 20

Make remittance payable to BOAT SPORT, Classified Advertising Dept., 215 Fourth Ave., New York 3, N. Y.

Around The Buoys

(*Continued from Page 30*)

the forty-mile-plus distance was Jim Rusing, skier, who is show director at Sunshine Springs, with Dick Rowe, Silver Springs as safety observer, and Jim Wynn, Sarasota, driver. The boat the trio used was an 18 ft. fiberglass Crosby powered by twin 60 hp Mercury Mark 75s.

Finishing in nearly a dead heat for top honors was another Sunshine Springs skier, Pete Sones, with Bob McWhorter, Sarasota, safety observer, and George Thompson, Fort Wayne, Ind., driver.

Fourth place overall, and the surprise team of the event, was the Class A winner for skiers towed by motors of under 20 c.i. piston displacement. The skier and safety observer, who alternated on the skis, were two twelve-year-old Sunshine Springs youngsters, Bob Lowrey and Jim Cash. The preteenage ski team led the entire group of forty-six other team entrants for six of the seven laps. They ultimately finished in fourth position overall and won Class A by a broad margin.

The home-built racer

The outboard racer with a limited budget or who for other reasons prefers to build his own boat hull from plans need not feel he is entering the game under a handicap. Some of the home rolled rigs have beaten the tailor-mades as long as there has been racing. A recent example of success with a home-built job is C. R. Harra of Kansas City, Mo. In the modified stock ranks, Harra, with an A-B Hydro built from McCrea plans, won nine trophies in a single season and placed runner-up in high points in his local club.

Latest Inboard Champs

Inboard championships not covered in the last issue of BOAT SPORT included the 44 c.i. events held at Mays Landing, N. J., with the winner Harry Nickol, York, Pa., in *Schaene Maedel*. At Newport Beach, Calif., Joe Burns of Parker, Ariz., won, the PODH title in his boat *Little Beaver*. At the same location, Jack Wells, North Hollywood, Calif., took the Crackerbox title in *Runnin' Wild*.—H.W.B.

Michigan's New Racing Props

Michigan Wheel Company reports its newly perfected "cupped" high tensile-bronze speed wheels were instrumental in establishing 7 new world's records at the 1957 APBA Nationals in Worcester, Mass.

In AU and ASH classes Craig DeWald jumped the previous records an astounding 3 mph driving a Mercury Quickie. In BU, DSH and 36 cu. in. classes speeds were raised approximately one mile. Of especial interest is the jumping of the D class engi... into the 70 mile bracket by Tony Rodrigues to an actual 70.727 mph. Two new Five-Mile competition records were also set with these new custom wheels in classes CU and BSH.

These propellers, according to the manufacturer, were standard factory models and used exactly as furnished —a departure from the previous practice of altering or re-working.

Dear Hank:

(*Continued from Page 33*)

Souping Up a Class A

I have a Class A motor and boat. I don't plan to race it, but I do enjoy getting as much speed as possible out of it. I have worked on the motor some and I have your book on outboards which came in real handy.

Do you know of any books that go into great detail about souping up a motor, such as using parts of different motors, reworking and adding parts? Would it be possible to build a supercharger for an outboard motor?

J. F., Atlanta, Georgia

YOU MENTION a Class A motor, b... you don't say what make it is and whether it is an alky or a gasoline burner.

I think it is quite possible for you to make a successful supercharger for an outboard motor, although I feel that you might get further by experimenting with solid fuel injection.

As to books, aside from my "Encyclopedia of Outboard Motorboating" you might try W. R. Carpenter's book: "The Outboard Raver's Manual," which has a lot of good carburetor data, information on cylinder set-ups, balancing—though all of this applies to the opposed twin SR or FR type of motor. —HWB

Building Up the Racing Motor

The A-B Class, cab-over hydro you advised me to build really flies. It is still in the experimental stage and a lot of testing is still to be done. My biggest problem is keeping the speedometer pick-up tube, or Pilot tube, in enough water to register properly. I also am trying to find a prop that will plane the boat; so far a Super OJ-AU Johnson is the only one that will do it.

I am now building up my engine, a KG-4H Mercury and need your hel... on a couple of problems.

No. 1: I am using a Tillotson model E-626-J carburetor (Johnson KR carb.) which works very well, gives exceptional acceleration out of the turns. I want to convert from the

gravity flow (tank on the powerhead) fuel system to a remote fuel supply—preferably pressurized—to obtain lower center of gravity. My question is, how sensitive is the E-626-J float and intake needle to pressure? If the float and needle will work with this kind of set-up, what should be the normal operating pressure? I wrote to the Tillotson Co. some time ago, but received no answer.

No. 2: I'm thinking of converting from 14 mm spark plugs to 18 mm ones, for a wider range. In so doing, won't this change the compression ratio —particularly when the 18 mm R series Champions have a longer reach than the 14 mm K-2 and K-3, as well as being larger in diameter? If this is so, what should be the cc measurement (piston at tdc) to the top of the spark plug threads of a KG-4 converted to 18 mm plugs, to give a 10:1 compression ratio?

W. O. H., Erie, Kansas

IF I WERE YOU, I would not convert your KG-4H Mercury to remote fuel tank. I think you are just letting yourself in for needless fuel problems. Since the tank with a full load won't add much more than 15 lbs, I don't think you will gain any particular advantage in eliminating it with the intention of lowering the boat's center of gravity. If you insist on a pressurized system, two to three pounds should be plenty.

As concerns your experiments with the Pitot tube pickup, you could have one of these made up of brass or aluminum at a local shop—designed about two inches deeper than the one you are now using. This would affect the calibration of the speedometer if it is a sensitive one, but you would only be using your speedometer for relay speed comparisons in checking different set-ups, wheels, etc., so this shouldn't matter.

The deeper Pitot tube will stay in the water during testing; which is your aim.

Concerning your carburetor, I would recommend a Tillotson model AJ-32A to replace the AJ-36A or the KR carb you mentioned. The KR carb or a Carter seemed to work out fine in a B modification, but on the A job, I would select the AJ-32A. I prefer running a No. 40 drill through the high speed metering jet and a No. 33 through the high speed adjusting orifice. For a fuel line, use at least ⅜ in i.d., if you plan to burn alcohol, which I presume you do.

Changing the diameter of your spark plug hole will change the compression ratio. Rather than doing this, I would get a set of high domed pistons and then set them up to get a volume rating with a 14 cc tube to the top of the spark plug threads. K2 or K3 plugs will probably be the right range for you. At about 6500 rpm you should be able to pull in the neighborhood of 18 hp. There are, of course, a number of additional modifications you can make. —HWB

1957 Record Breakers

(*Continued from Page 25*)

at the A.P.B.A. Stock Divisional Championships at Tonawanda, N. Y. The three-pointer in which Craig set the record was a borrowed one. Its condition could scarcely be termed well-groomed since the boat had been stored right side up on saw horses, outside and uncovered, for an entire New England winter. The hooks and bellies that exposure to snow and rain created in it seemed to have developed in just the right places for it was a really going job.

Sandwiched between Dewald's and Billy Hutchin's marks was another new record, also established at Worcester. This one was posted by a 28-year-old secretary from Ridley Park, Pa., Jane Smith. Jane's ride to glory lasted less than an hour before Dewald unchivalrously erased it.

A CU competition mark established by Dion Arrigoni, Durham, Conn., was only slightly longer lived. Dion was clocked over the five-mile competition distance in a national's elimination heat at 45.40 mph. Later the same day John Ennenga, the new CU title holder, drove the same distance in another prenationals warm-up at an average speed of 47.307 mph.

Less hard to take were the record robbers who stole only from themselves. Tony Rodrigues, a 30-year-old Civil Engineer from Highland, N. Y., drove a Merc powered Sid-Craft in DSH class through the traps at 69.985 mph. This tossed out Burt Ross's five-year-old mark of 69.739 mph, but Ross had held it so long that errors in the last two A.P.B.A. annuals had even attributed his mark to a former BSH record breaker.

Rodrigues' mill was plenty warm so he switched the motor to a four-point Baycraft which had been modified about the foreplanes by the Schroeders of Niagara Falls, N. Y. Tony then proceeded to float through the traps at 70.624 mph. Still not satisfied, he repeated his two-way run and finally boosted the average to 70.727 mph. Tony said that he had more speed in the rig, but at any quicker gait the boat started to drift sideways because of the prop torque.

Dewald actually set three records (two that held) boosting the former 46.401 mph AU mark to a tail riding 49.164 mph with the hydro A motor switched to a Raveau runabout hull. In this same boat, powered by a Merc 20H, he ran through the traps at 54.007 mph. This was a new BU record but it came unglued in short order when Bob McCann of Pottstown, Pa., with a Champion Hot Rod chalked up a scintillating average of 54.115 mph.

Eddie "Tiger" Petrini, the 11-year-old JU class champion, set a new mark which was recorded in the last issue of BOAT SPORT along with other one-mile trial data. The Tiger had started his record breaking when he was only ten. Wonder what the kid will do when he

(*Continued on Page 42*)

gets a few more years' experience?

In the inboarding ranks, Frank Foulke, Chairman of the A.P.B.A. Inboard Racing Commission, has approved the following new marks for one-mile straightaway averages: F Service Runabout, Jim Venner, Plainfield, N. J., in his hull *Too Much*, 60.901 mph; 280 c.i. inboard hydro, Tom Carter, Drexel Hill, Pa., 92.614 mph in his boat *Tom Cat*. In the five-mile competition ranks, Frank has certified that Hank Vogel, Webster, N. Y., drove his 225 c.i. hydro *My Sin III* to top the former mark by 0.14 mph with a new average of 80.573 mph. Ray Lynn of Philadelphia driving Al Gosa's 280 c.i. hydro, *Al-E-Cat*, averaged 73.952 mph to up the tempo in this new stock inboard class.

At Corpus Christi, Tex., at the N.O.A. Modified Stock Nationals, Jimmy Epperson, Fort Worth, set a new A Runabout mark of 46.114 mph only to have it broken one heat later by Deanie Montgomery, Corsicana, Tex., with a speed of 46.392 mph. Both used German-built Konigs.

Jimmy Jordan, Haysville, Kans., sewed up the Wynn Oil Diamond Pin award and $100 cash bonus with the biggest record increase when he boosted the modified Class A Hydro from 43.689 mph to 48.101 mph. Keith Sorenson, La Crescenta, Calif., was another N.O.A. record breaker; his in B modified Merc powered hydro, boosting the former Fred Simmons' mark of 49.315 mph to 49.972 mph.

At mile trials held the day following the Texas championships, Dieter Konig of Berlin, Germany, set a new Class B modified hydro straightaway mark of 65.814 mph. Bud Jones, Sioux City, Iowa, was another straightaway record breaker at the same location, his with a Class C modified hydro, at 64.865 mph using a worked over Merc 30H mill.

A.P.B.A.'s Region 11 proved to be a record setting center for both competition courses and the half-mile traps. A report from Al Bligh, Yreka, Calif., one of the hotter of the stock drivers on the West Coast, tells of some of the outstanding top speeds clocked at Klamath and Orrick, California. Our reporter Bligh, incidentally, took second in ASH at the Divisionals and also set a half-mile straightaway record for ASH at 51.144 mph. Other A.P.B.A. half-mile marks (which oddly in many cases are slower than one-mile marks) are as follows: JU runabout, Barbara Schumacher, 26.946 mph; AU, Ronnie Hill, 48.352 mph; CU, Bob Rubis, 59.387 mph; DU, Bill Larsen, 61.071 mph; CSH, Ted Davey, 63.212 mph; DSH, Bill Rucker, 67.821 mph. These have not as yet been given official approval.

At the Western Divisionals, Art Knolty, who finished as runnerup to the BU Divisional Champion Carl Gerfen, won one heat at 47.720 mph. In C Stock Hydro, Larry Adams, the Divisional Champ, averaged 51.724 mph in his fastest five miler and Bob Rubis who was runner up to Bill Larsen in the CU title event, clocked one of his five-mile heats at 49.128 mph.

Other Western Divisional Champions included Bill Schumacher, ASH; John Alden, BSH (for the second straight year), "36" class, [illegible] Schwartzenbach; AU, Ron Hill and [illegible] Bill Larsen.—H.W.B.

Inboard championships not covered in the last issue of BOAT SPORT included the 44 c.i. events held at Mays Landing, N. J., with the winner Harry Nickol, York, Pa., in *Schaene Maedel*. At Newport Beach, Calif., Joe Burns of Parker, Ariz., won the PODH title in his boat *Little Beaver*. At the same location, Jack Wells, North Hollywood, Calif., took the Crackerbox title in *Runnin' Wild*.—H.W.B.

Albany Race On Again

ALBANY, N. Y., 1958—The most famous long distance detachable motor grind in racing history is expected to return to the A.P.B.A. calendar this season under the sponsorship of the New York Daily Mirror. The probable date is June 2.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

Boat Sport, published bi-monthly at Minneapolis, Minn., for October 1, 1957.

1. The names and addresses of the publisher, editor, managing editor and business managers are: Publishers: Joseph J. Hardie & Raymond J. Kelly, 215 Fourth Ave., N. Y. 3, N. Y. Editor: Tom Davin, 215 Fourth Ave., N. Y. 3, N. Y. Managing Editor: none. Business Manager: Raymond J. Kelly, 215 Fourth Ave., N. Y. 3, N. Y.

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JOSEPH J. HARDIE, Publisher

Sworn to and subscribed before me this 17th day of September, 1957.

LEONARD SPARACIO
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No. 31-9116400
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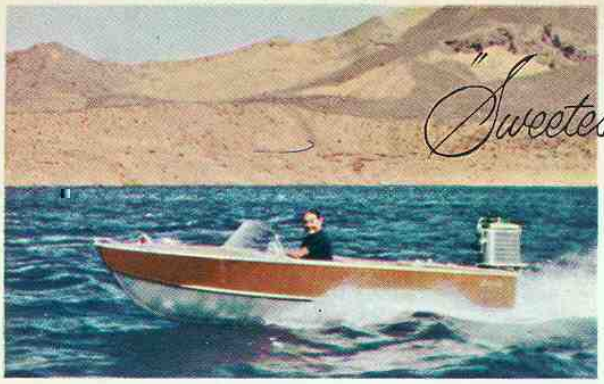

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