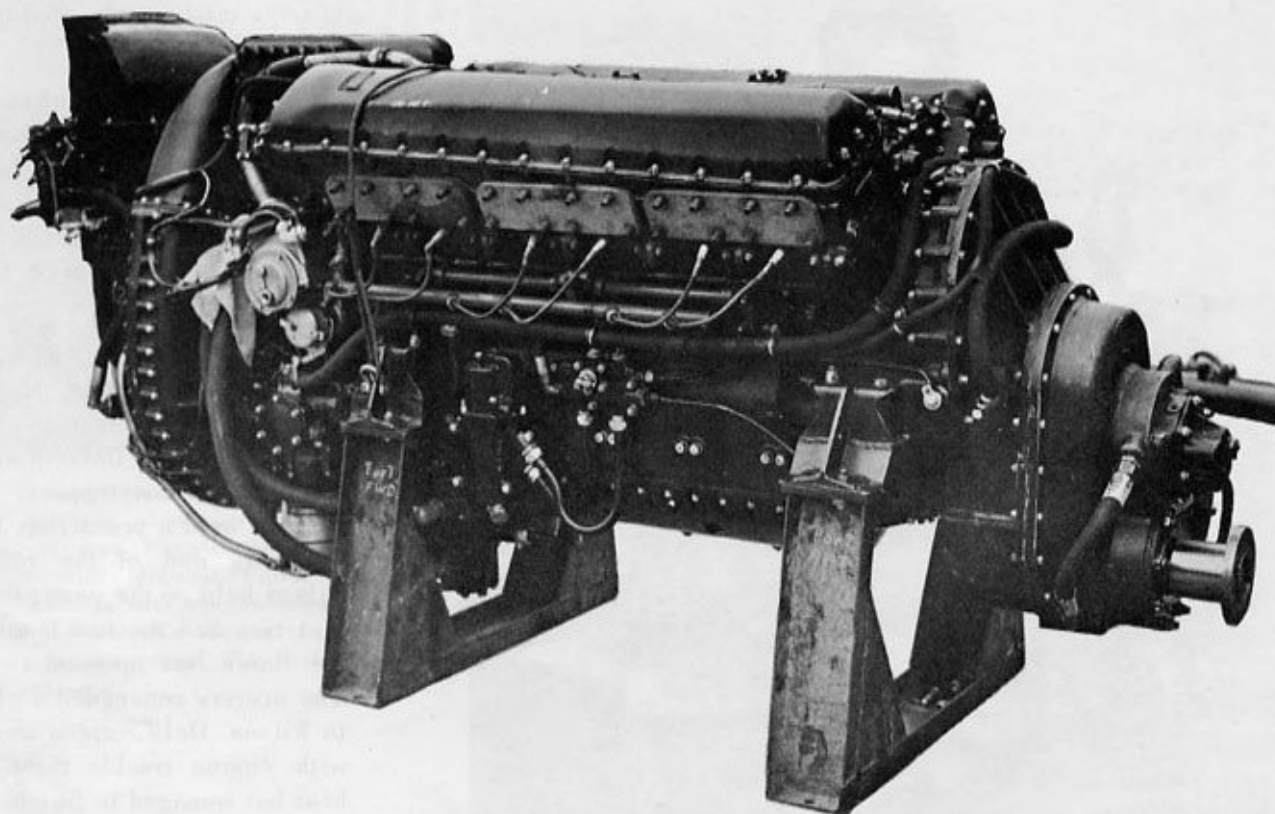


ARE THE



UNLIMITEDS

Gold Cup class boats are running out of engines. New power must be found if the Unlimited Division of the American Power Boat Association is to continue.

Present power is provided by two World War II surplus powerplants, Allison and Packard-Merlins (Rolls Royce).

But the rate at which these engines are being blown

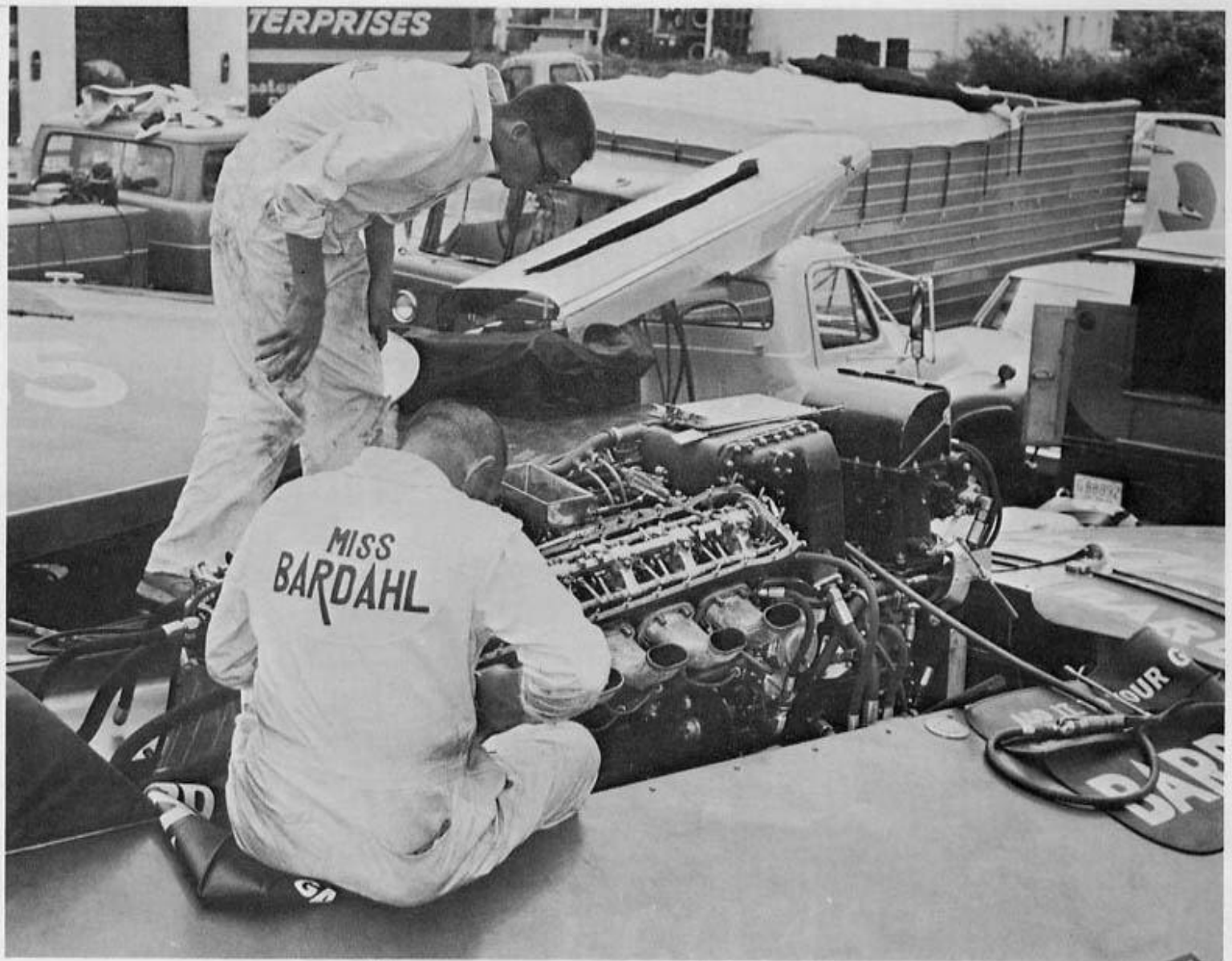
is a threat to the class.

In Detroit in practice, in qualifying and in the Gold Cup race itself, owners went deeply into their reserves as engines, mainly superchargers, went to pieces.

There were more failures at Couer d'Alene, Idaho, before and during the running of the Diamond Cup.

LIMITED?

by Harry LeDuc



Unlimited powerplants require constant maintenance.

Some owners won't have enough engines to finish the championship circuit this season which, besides Seattle, Aug. 11, calls for races at Madison, Ind., the President's Cup at Washington, D.C., and at Lake Tahoe.

One racer, the \$Bill, is said to be down to its last engine.

The Schoeniths, Joe and Lee, haven't too many left for their Gales. George Simon's Miss U.S.I. and Miss U.S.V., have been retired though not because Simon has run out of engines. The hulls are too fatigued for further safe racing, Simon has decided.

Heiress Shirley Mendelson McDonald, who owns the Notre Dame, is relatively rich in engines. She had eight or ten Allison's at last count. Further, they seem to be standing up under chief mechanic Bud Meldrum's care and the driving of Col. Warner Gardner.

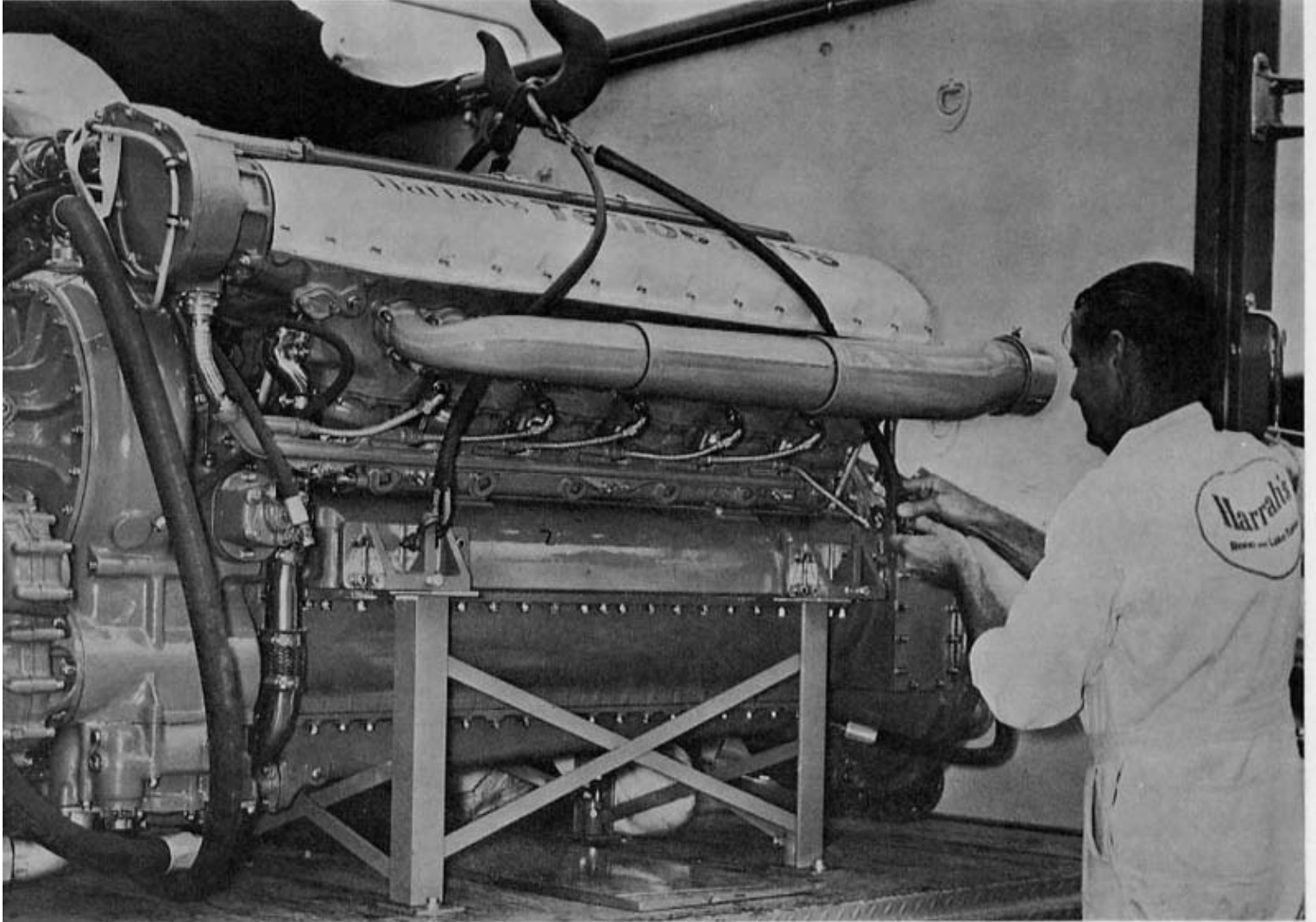
On the West Coast engines are becoming hard to come by for the Thriftway, Tahoe Miss, Miss Bardahl and

the others.

Robert B. Evans owns more Allison's and Packard-Merlins than anyone. He also owns the Staudacher Marine Industries, Inc., of Kawkawlin, Mich., where most of the Gold Cup class racers have been produced since World War II, with Les Staudacher their builder. Staudacher remains president of the firm; and is actively running the business despite incapacitation following the crack-up of Evans' jet-powered Miss Stars and Stripes II on Hubbard Lake, near Alpena, Mich., last May 16.

The Evans-Staudacher combine have about a score of engines at Kawkawlin, more 'Rolls' than Allison's. They are not for sale as such, however. They are intended for the racing hulls the Kawkawlin plant turns out; often as many as two or three a year.

"In five years, possibly much sooner," says Staudacher, "there won't be any Allison's or 'Rolls' engines. Like cannibals, they're actually eating up one another now. By that is meant, that when one 'blows'



Mechanics prepare to install an engine in *Taboe Miss* which is noted for its clean, well-kept engines. Crews can change engines in as little as 20 minutes. Photo by Harold Rose

seriously it becomes salvage for another that can be repaired. We've checked the warehouses of the nation and we know there just aren't any good ones to be had. A good Allison or 'Rolls' is one we call 'new' because it never has been used."

What then is the future of Unlimited class racing?

Staudacher and Evans are giving this a lot of thought. "We think," says Les, "that some discussions are due with the heads of the automotive and aluminum industries." He adds:

"Boat racing might take a leaf out of the 500 mile race story at Indianapolis last May where those two Lotus-Fords, weighing hundreds of pounds less than their rivals, finished second and seventh - one might have won the race had there been a faster pit stop for the car Jim Clark finished second."

Staudacher thinks it feasible to put four auto engines hooked up in tandem into a boat and accomplish the effort using probably no more weight than today's three-pointers. A 'Rolls' weighs about 2,000 pounds, an Allison around 1,500.

"We could hook 'em up to one 'screw' or we could use two propellers," Staudacher explains, "and we believe we would have the power and the acceleration to go faster even than today's boats are going. Personally, I favor a single propeller because you can use the torque to advantage in the turns."

Not since Gar Wood's *Miss America X* have there been four engines installed in a race boat. That was in 1932 when the Tenth successfully defended the Harmsworth Trophy on Lake St. Clair and followed up by raising the world record to 124.81 miles an hour at Algonac, Michigan.

But *Miss America X*, with four huge Liberty engines made by Packard for World War I, weighed more than nine tons, hull and all.

Staudacher interposes: "With the light auto engines of the present and with them getting lighter as more aluminum is added, we could produce a race boat that would weigh only around 5,000 pounds. That's the present weight of most of them today. We might even build with less weight."

Jet engines are plentiful. They can be bought for a
continued on page 36

few hundred dollars. They would eliminate the need for heavy gearboxes, propeller shafts and propellers, too.

Why not change the rules and plan a future for jet-powered Gold Cup class race boats?

Staudacher certainly is the nation's No. 1 authority on jet-power in boats since his experiences date back to 1959 as he tried to break England's 260.35 mph world record, first with Guy Lombardo's Tempo-Alcoa on Pyramid Lake, Nev., and last year and this year with Evan's Miss Stars and Stripes II. But . . .

"Jets are out of the question as competitive boats for some time to come," Staudacher answers. "They cut big holes in the water, creating wake conditions worse than any rooster tail shot up by the prop jobs. If a fellow got the lead it would be awfully hard to get around him.

"Against the jet also is the fact that they are not very maneuverable and it would be tough getting them through the turns at any real speed. You know, with a jet you just have a rudder. No torque. No wheel. Nothing but the rudder by which to steer. There remains a lot of research and testing before the maneuverability of jet boats is improved.

"Another jet problem is the fuel. They eat a lot of it. They burn it up by the drums not by the gallons. Yes, you could get through a 15-mile heat which is what the unlimiteds are running today but you couldn't afford to spend too much time out on the course jockeying for position before the start of a heat. About 18 minutes of running is all I ever got out of a load of fuel in Miss Stars and Stripes II."

That would seem to put the future of Gold Cup class racing up to the automotive and the aluminum industries, each contributing to, and helping solve, the problems of weight, power and acceleration.

For, unquestionably, the Gold Cup class is running out of engines. ●