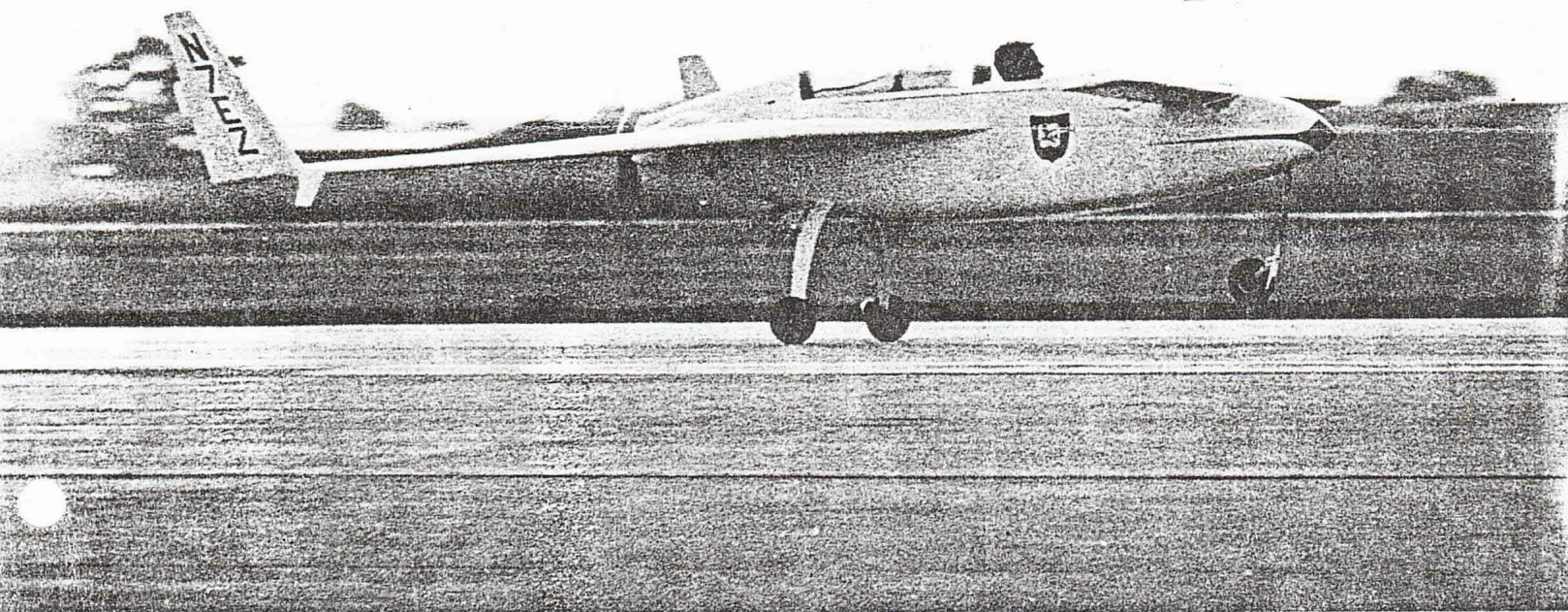


VARI-EZE . . . FOR THE RECORD

David, I don't believe it would
be possible to get a blow
up of Jim's photo, but I
will ask - it will
be
expensive

Mil



By Jack Cox

(Photo by Jack Cox)

5:55 a.m. . . . take-off run on the record flight.

5:30 IS A brutal hour in the morning for anyone to be up and about after a week of endless tramping up and down the aircraft display lines at Oshkosh. Yet, a score or so of us have summoned the strength from somewhere and now find ourselves huddled around this pale apparition of an airplane, intently watching as Bill Turner and Art Froehlich jiggle the weights right and left along the scale slides and call out:

"Left main, 399.5 pounds."

"Right main, 357.25 pounds."

"Nose gear, 169.75 pounds."

Harold Best-Devereux, the NAA/F.A.I. Official Observer for all that hopefully will transpire this day, jots down the numbers and after some quick addition, almost solemnly announces:

"That comes to 926.5 pounds, Burt. No sweat for the record."

After a few slightly puzzled looks and questions about how the weight could vary so much from a similar weigh-in two mornings before, the chatter trails off into a "What the heck, we're still 'way below 1100

pounds", murmur. Harold's crisp British accent snaps everyone back to the matter at hand. . .

"Now, gentlemen, will you please step back - completely away from the aircraft?"

As the rest of us back off a few grudging steps, Harold strides forward, reaches deep into the rear cockpit of the Vari-Eze - behind the hulking fiber-glass auxiliary fuel tank - and starts the barograph. Then he proceeds to tape over the filler caps, affixing his

initials to each with a flourish worthy of his station . . . and the occasion. Taking all this in with a slightly bemused expression on his face is pilot Dick Rutan . . . waiting calmly in the front seat, already strapped in and ready to go. Dick is the only one in the crowd who really looks like he is up to the occasion. Decked out in a powder blue turtle neck pullover, he is downright dapper as compared to the rest of us who have the disheveled appearance of a bunch of sleepy heads who have just been roused out of bed . . . which, of course, is exactly the case.

Draped over each of Dick's shoulders are several stout strings,

each attached to some unseen object behind his seat back — plastic bags containing a couple of Baby Ruth candy bars, a package of cheese and crackers, three pull-top cans containing Beenie-Weenies, chicken gumbo and chocolate pudding, a Chap Stick, Rollaids and some aspirin and a couple of plastic bottles full of water laced with just a dash of lemon juice, $\frac{3}{4}$ of a gallon in all. One string leads to a large, empty plastic bottle.

Not exactly an Apollo life support system, but simple, effective and, most important, lightweight.

A short exchange of pleasantries between Dick and Harold ends with a groping with the canopy support rod and a lowering and locking of the plexiglass bubble through which, if all goes well, Dick's only sensory contact with the rest of us will be possible for the next 12 to 14 hours . . . except for intermittent use of his battery powered Escort 110 radio.

With brother Dick properly and officially encapsulated in the VariEze, Burt Rutan takes charge.

"O.K., let's have lots of hands under the canard and the main wing — anyplace except the control surface on the canard — and s-l-o-w-l-y ease forward off the scales and down the ramps."

Instantly, every square inch of under surface of the VariEze is cupped in the palm of someone's hand . . . attesting at once to the ol' EAA can-do spirit and the advantages of the "hard" skin of the foam and fiber-glass construction method employed in the radical little canard.

"All together, now . . . lift!"

Effortlessly, the tiny bird, its pilot and 279 pounds of gasoline are palm-powered up, forward and gently down on the taxiway . . . its first "flight" of the day a total success.

Now Burt assumes the position at the rear of the craft and addresses the Monnett VW and Ted Hendrickson prop.

"Make it hot."

Flip . . . flip . . . flip. Come on, you little Wolfsburg prima donna — this is no time for dramatic pauses! Flip . . . flip . . . b-r-o-o-o-m!

"O.K., just as a precaution let's walk him out to the end of the runway. Keep the nosewheel light over the bumps and tar strips."

The leading edges of the canard and main wing lined with willing EAAers like starlings on a power-line, the rather odd looking entourage marches down the taxiway from EAA's blue arch, on to runway 18/36 and heads north toward the 18 end. It's a funny looking sight . . . for a few strides, all are in step, then one and then another get out of step, then all are in step again. Reminds me of a company of raw recruits at Boot Camp nearly 20 years ago. From the front all that can be seen are two files of shoulder-to-shoulder "troops" — no airplane is visible, just a white nose of something protruding between the two halves of the front file, a kind of silly round face with wide red lips but no eyes. When the troops did a

column left on the runway, Burt and John Monnett pulled out and climbed aboard the VariViggen. Now they have fired it up and are taxiing along behind the VariEze, preparing to accompany it on the first lap of this attempt to break Ed Leshner's World's Closed Course Distance Record of 1554.297 miles set back in 1970.

As the end of the runway is neared, I turn my car around and race down towards the other end, trying to guess about where the heavily laden little canard will lift off. I guesstimate the area just north of where the Florida Chapter's Lockheed Lodestar is parked as a likely spot . . . based on what I had seen on Saturday morning. Screeching to a halt, wife Golda and I bound out and start prefocusing our cameras and wondering whether the red ball that is the sun will lift up out of the low stratus hanging over Lake Winnebago to zap our lens opening settings . . . just as the VariEze comes whistling by us.



(Photo by Lee Fray)
Official certification of the scales by Vernon Erickson of the local Weights and Measures office.



(Photo by Dick Stouffer)

Dick Rutan, Burt Rutan and Harold Best-Devereux check the barograph to be sure the squiggly little line tells all. It did.

From our vantage point of about 4500 feet down the runway, we can hardly see the VariEze, so razor-like is its head-on profile. We see the "troops" move away from it and we hear the growl of the Vari-Viggen's Lycoming, but we hear nothing from the VW and can detect no movement from either aircraft.

More noise . . . and finally it appears the VariViggen is advancing, but the VariEze still appears to be stationary. Then, you can tell — it has moved. The motion seems lateral from this angle, however . . . and still no VW buzz. This almost head-on angle and the distance are tremendously deceptive.

Suddenly, the angle widens to a point where the VariEze seems to wildly accelerate and now we are frantically fumbling with the cameras . . .

"My gosh, he's going to flash right by before I can punch the shutter!"

The rest of the take-off is tightly framed in my camera's view finder. Dick is really ripping now — holding 'er down to build up speed. Just as I snap off my first shot, the nose gear is raised and on the second click I see the mains clear the pavement. Dick's Air Force training makes him a believer in airspeed above all else . . . he levels out just after lift-off and accelerates in ground effect right down to the end

of the runway. Although I don't see it, I hear the VariViggen snarl by in hot pursuit of the VariEze . . . futile pursuit, it turns out, for as Dick smoothly brings up the VariEze's nose the rate of climb is far in excess of what even the new long winged VariViggen is capable. Turning inside the tiny swept-wing wonder as it arcs around to its northeasterly course gains little or nothing for Burt. I can't believe it . . . that little son-of-a-gun is carrying over 126 pounds **more** than its own empty weight, propelled by a 1700cc VW — and the 150 hp VariViggen can't even head him off at the pass!

Leveling off, Dick throttles back to his programmed rpms and begins cruising up the shore of Lake Winnebago, heading for his turn point at Menominee, Michigan. Only then can the VariViggen catch up and slide in under the VariEze for a look-see to determine if all is well

in the engine compartment. In a matter of moments, the VariEze is just a speck, then nothing. The larger VariViggen appears to be alone. Finally, both have disappeared and those of us on the ground drift back toward the Control Center trailer to sit out the expected hour and twenty-five minute lapping of the Oshkosh/Menominee course. If that VW continues to purr away, we can expect to spot that unmistakable VariEze profile overhead at about 7:20 or so.

The long waits between laps provided time for reflection upon the events of the past few weeks and, particularly, the last few days leading up to this Monday morning record flight attempt. By all rights that airplane should not be in the air now . . . the engine should be on another airplane and in another city . . . and, at best, without the unflagging assistance of scores of EAAers, the VariEze would still be sitting in one of the workshops with oil drooling from its belly. The past

48 hours had been incredible . . . and undoubtedly possible only at Oshkosh during Convention week.

The plan, as stated by Burt Rutan in the July issue of *SPORT AVIATION*, was to fly the VariEze non-stop from Mojave to Oshkosh. Then an assault would be made on the Closed Course Distance Record for aircraft in the F.A.I.'s Class C-1a Group I. This is the class for the smallest of aircraft, those weighing less than 500 kilograms or 1102 pounds. Most of the records in this class belong to Ed Lesher and his super efficient little homebuilt, the Teal. It would not be an easy task to take any of them away.

Strangely enough, however, this saga did not start in Mojave . . . or even in California. It started the Saturday before Oshkosh over Elgin, Illinois, just west of Chicago. John Monnett had just circled over his house in his Sonerai I to let wife Betty know he would be home in a few minutes. In quick succession he experienced an engine stoppage, an easy glide to a nearby street adjacent to a golf course, a successful touch down . . . and a nasty ground loop after hooking the very last sign post in his path. No personal injuries, other than to his pride when he learned he had run out of fuel, but the familiar little green racer was out of it for Oshkosh '75 with crunched wingtips, main gear and aft fuselage.

Then the scene shifts to Mojave on the morning of Wednesday, July 30. Burt and Carolyn Rutan had flown east in the VariViggen a few days before, leaving his brother Dick with the task(?) of flying the VariEze to the EAA Fly-In at Oshkosh, hopefully in one big hop. The little bird had nearly 100 hours of flying time on it when Burt left and all manner of flight testing, fuel consumption

tests, etc. had been accomplished. All that was left was for Major (Lt. Colonel by the time you are reading this) Richard Rutan, USAF, Field Maintenance Squadron Commander of the 355th Tactical Fighter Wing at Davis-Monthan AFB near Tucson, to get away from his duties, get up to Mojave and blast off on Wednesday. Flying non-stop to Oshkosh would be the grand entrance of all times for a new homebuilt design, Burt and Dick had figured.

In the wee hours of morning, Howard Ginn and other local EAA types strapped Dick in and fired up the 1834cc Barker VW . . . only to have oil come gushing out of the cowl. The start-up had ruptured the oil cooler. A quick decision was made to remove the cooler, plumb the system "straight" and attempt the flight anyway. This wasted a precious hour or so but still left just enough time to make Oshkosh by sundown . . . if winds were favorable.

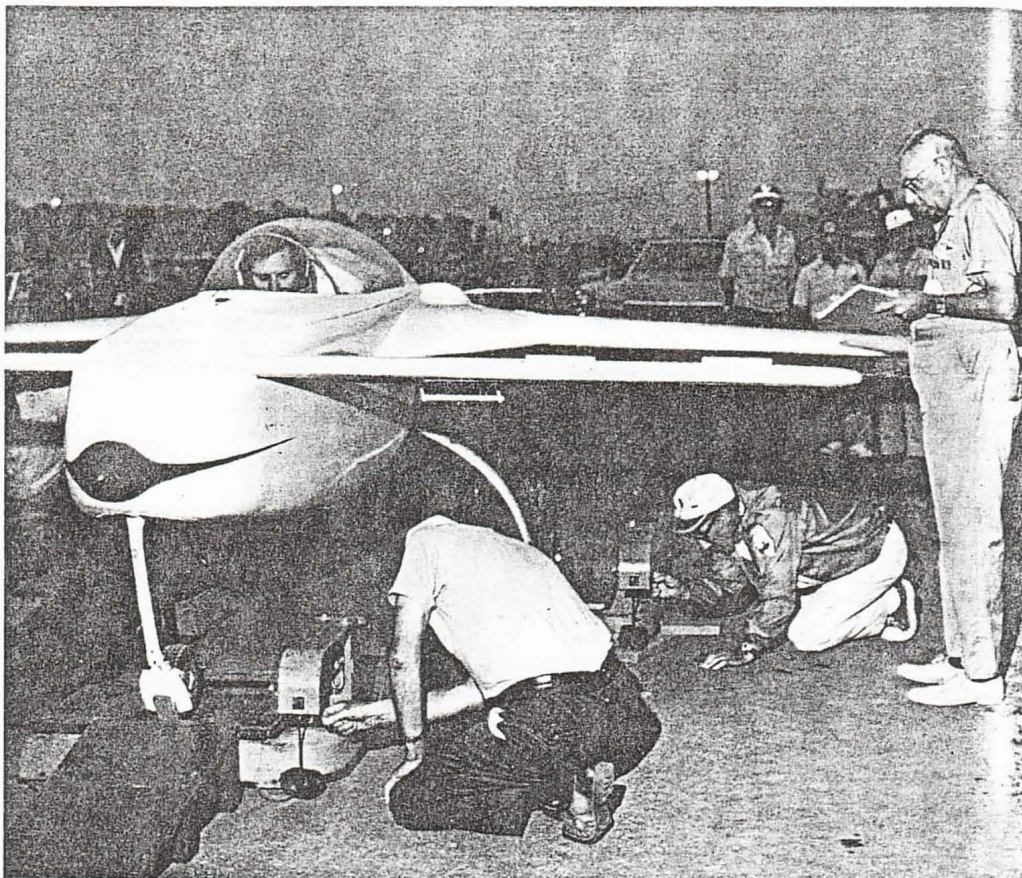
Taking off with nearly 50 gallons aboard, Dick climbed to 7500 feet and headed east, accompanied the first 100 miles by Howard in his T-18. The route to be flown was a gentle curve out across the Sierras, southern Nevada, through the heart of Utah, clipping the corners of Wyoming, Nebraska, South Dakota, Minnesota and, finally, a dash across the mid section of Wisconsin to Oshkosh. The course was selected partly because it overflowed major Interstate highways and partly because it allowed some pressure system flying that promised tailwinds.

Settling back in the semi-supine and super-comfortable seat, Dick could see nothing ahead except clear sailing — visibility was unlimited, all the gauges were in the green and he was indeed picking up a tailwind. There was even time for a little thought of things past . . . how he had entered the Air Force in May of



(Photo by Dick Stouffer)
Harold Best-Devereux points to his seal on the fuselage tank.

(Photo by Dick Stouffer)
David Scott supervises the weigh-in
for the first, unsuccessful record
attempt.



1958 as a navigator and after 7 years of fingering computers and figuring ETAs had been assigned to flight training at Del Rio, Texas. Even now, high above the Rockies, a little swell of pride came from recalling he was first in his class of 400 cadets at Del Rio . . . and that this got him the thing he wanted most in the world at the time — assignment as a fighter pilot. Only two F-100 slots were awarded his class, and one was his! After gunnery school at Luke, it was off to Phu Cat, South Vietnam and combat in the F-100. Eventually, he would volunteer for a special assignment as a "Super FAC", flying 104 successful, low altitude missions over North Vietnam. Opting for several additional tours, he and his F-100F Commando Sabre would spend more hours over the North than any other combat pilot — no one has challenged his claim to this day. And then there was that 105th mission . . . checking out a new pilot . . . hit by ground fire . . . the race towards the coast with the plane streaming flaming jet fuel . . . punching out at the last moment and the hours on a life raft until the chopper arrived.

A ground speed check somewhere over Utah revealed that the tailwind was really picking up. Later checks showed that a full 45 minutes had been picked up — wow! Call a pre-selected FSS that Burt will call later in the day to let him know that ETA at Oshkosh will be about 20 minutes before official sunset. What luck! This called for another Life Saver from the package taped to the side of the cockpit.

Slipping back into a little rapture of the heights, Dick recalled a pleasant 4 year tour of duty in England following 'Nam . . . spoiled only by that day when he saw his F-100's oil pressure jerking back to zero in, of all spots, the last stages of an instrument approach. Seconds later he was dangling in his chute harness from a substantial English tree. Next came a tour at Wright Pat and the chance to fly almost everything in

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the inventory . . . most impressive? The F-111.

About this time Lady Luck turned her beneficent smile elsewhere. Over Nebraska the tailwinds became headwinds and the oil temperature began to rise. Over southwestern Minnesota the oil temperature **and the oil pressure** started shooting up. The more he stared at that oil pressure guage, the more it looked like a twitching F-100 guage that no longer seemed so long ago or very far away . . . and this time there was no ejection seat or English tree. Down there there's only . . . an airport and a Holiday Inn right beside the Interstate???

Not one to question Providence, Dick took advantage of his "gift" airport and shortly was rolling out on the runway at Worthington, Minnesota . . . after 8 hours and 50 minutes of non-stop, non-refueled flying, some 1500 miles out of Mojave. And

wouldn't you know it, the first persons to run out to greet him were EAAers — they're everywhere, you know.

A check of the engine revealed nothing that could be seen, except that most of the oil had been consumed. This would explain the rise in oil temperature, but what caused the oil pressure to rise?? After replenishing the oil supply, a run-up showed everything in the green again . . . and left a nagging suspicion that in the rush to remove the oil cooler that morning, maybe the oil

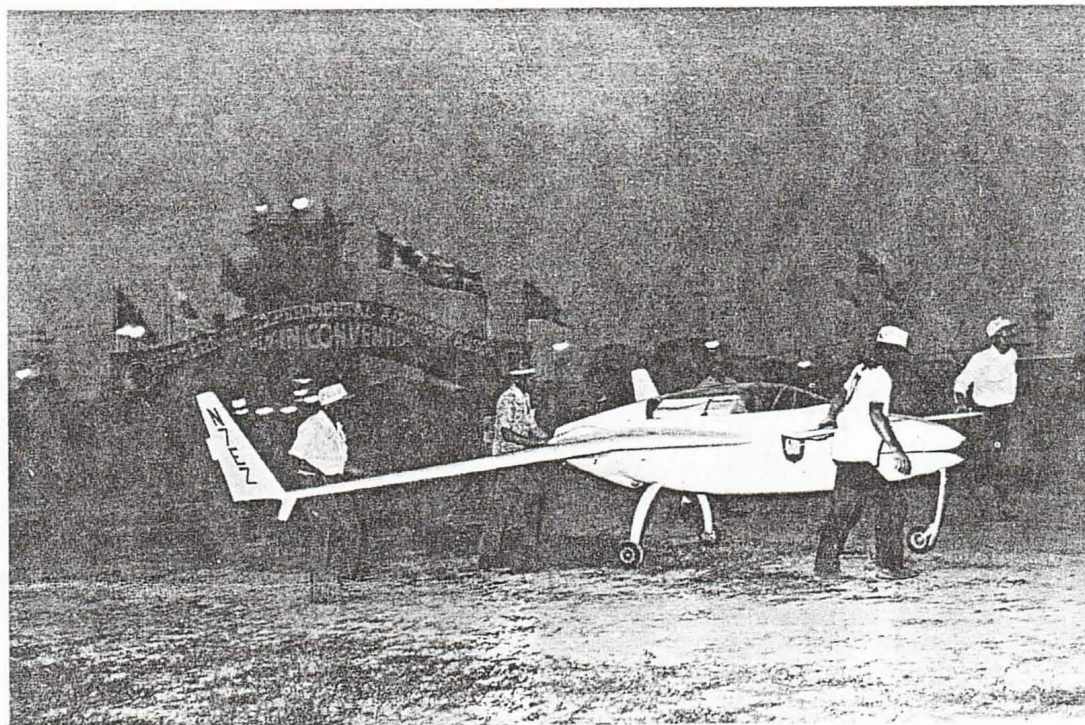
had not been topped off before take off. Better call Burt and give him the bad news.

Burt, meanwhile, had been following the progress of the flight by calling in to the FSS stations along the route that he and Dick had agreed to use as "message drops". Dick was hardly on the ground before Burt knew about it and shortly the two were talking it all over by phone. After hearing about the puzzling oil pressure reading, Burt agreed Dick had made the wise decision, sparing himself and the VariEze to fly again another day.

After a night's rest in that Holiday Inn, Dick flew on to Oshkosh the next morning . . . to the most spectacular reception an aircraft has ever received at an EAA fly-in. Several PA announcements had been made the previous day keeping everyone informed of the VariEze's progress as it winged its way across the continent, and Burt had talked briefly at the evening program detailing the problem with the oil pressure. An announcement was made Thursday morning when the tower reported the VariEze entering the pattern at Oshkosh and it appeared that everyone there was standing on the show line — just like at evening air show time — to witness the landing on runway 18 at 8:40 a.m. There was no way to taxi in through such a multitude — the tiny craft had to be walked to its already roped off parking spot beside the VariViggen. There it was to be totally surrounded by huge crowds every minute of the daylight hours that it was on the ground.

A thorough check was immediately made of the engine and nothing could be found awry. After removing the long range fuel tank from the rear cockpit, a test flight was made with this writer serving as an inadequate replacement for the weight of 35 gallons of fuel. Again, no problems. With no controls in the rear 'pit, my only impressions of the VariEze were strictly from a passenger's point of view . . . perfectly normal take-off and landing characteristics — no wild angles of attack or unusual gyrations of any sort; the absence of propeller noise; no discernible wind noise over the moderate buzz of the VW; the ability of pilot and passenger to converse at almost normal conversation levels; and very comfortable seating and tremendous visibility.

On Friday Dick took the bird out for some more flying and on landing, had to go around to avoid a slow plane rolling out long on the runway. Cranking the nose gear up and then right back down again for the second landing attempt, he appar-



(Photo by Dick Stouffer)

Pre-dawn roll out of the VariEze for the first record attempt.

ently did not get the circulating ball system wound up to the stops — although it had felt to him it was "down and locked." On touchdown, the little panel mounted crank started spinning wildly, slowly letting the nose right down on the pavement. A layer or two of fiber-glass was ground off the nose gear leg and the bottom skin, but that was the extent of the damage. Repairs were made by Gary Morris right at the aircraft's parking spot — with a pair of scissors, a paint brush, a can of epoxy resin and strips of glass cloth. By evening, 7EZ was pronounced ready for the record attempt the following morning, Saturday, August 2.

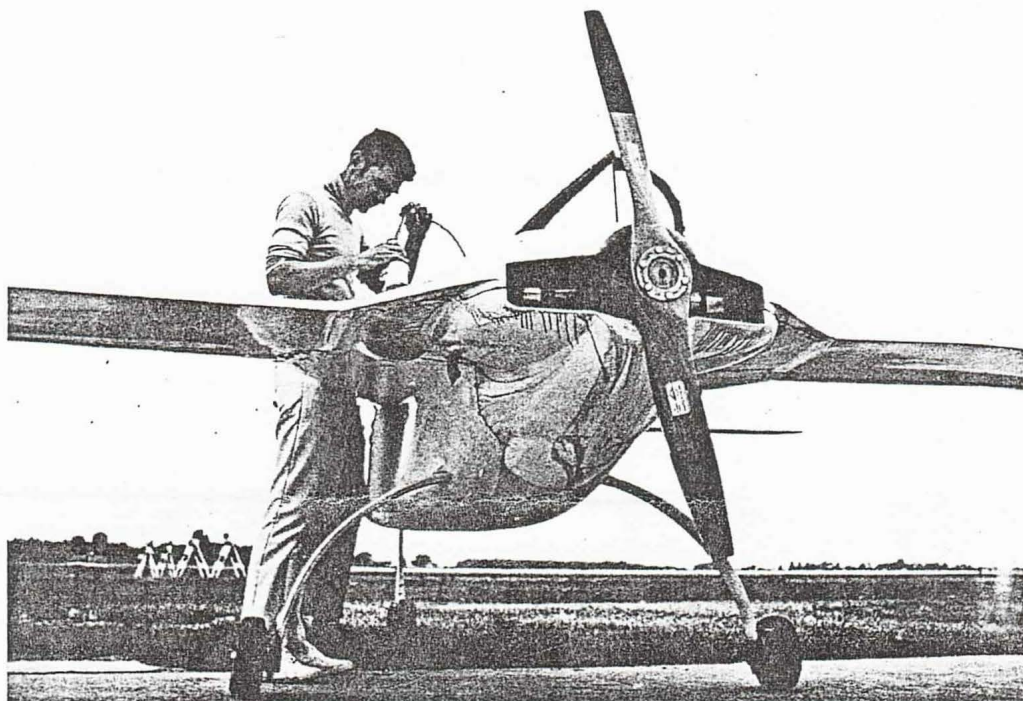
All that day frantic preparations were being made elsewhere on the field for the record attempt. Several weeks earlier, Burt had made application to NAA, the U.S. F.A.I. affiliate, for the attempt. David Scott had been designated as the official NAA observer . . . and he had much to "observe" even before the first prop was turned. A barograph had to be smoked and sealed, scales had to be certified, turn point observers on the other end of the closed course had to be lined up, communication with the Oshkosh tower had to be coordinated, etc. Fortunately, Bill Turner also became available at the conclusion of the very successful EAA Aviation Greats Day program and pitched in with the legwork. Harold Best-Devereux, who was an old hand at this sort of thing, was there whenever he was needed.

Adding to the last minute adrenalin level was the fact that the closed course was changed at the eleventh hour. All week the weather had been unseasonably hot for Wisconsin. Gulf moisture was being pumped up the back side of a titanic high pressure area stalled in the east, resulting in a really bad haze condition all over the mid-west. The original closed course was to have been from the Oshkosh Omni to the Burlington, Wisconsin Omni — but the rather featureless Wisconsin landscape would make Burlington awfully hard to find groping through the atmospheric goop. The use of omni could not be depended upon because the VariEze's radio was powered only by a primary system consisting of an 8 amp gell cell and a secondary system consisting of a 2 amp motorcycle battery. Only intermittent use would be possible because the electronic instruments were also drawing off the power supply. The Barker engine was devoid of all but mags and a carb to keep it at a spare 138 pounds. Starters and generators simply

meant less fuel, reasoned Burt. Being the Original Interstate/Railroad/Coastline Chicken Flyer, I suggested a course I have often flown: up the west shoreline of Lake Winnebago, over the freeway to the city of Green Bay and up the west shore of Green Bay to Menominee, Michigan and return — a 182 mile, no-sweat navigation run, even in marginal visibility. This met with everyone's approval . . . except now how do we find a turn point observer willing to be on duty for about 13 or 14 consecutive hours?

Ah, but this is EAA, fellows! It just happens that a new Chapter, number 535, has been formed in that area, and its president, Jim LaMalfa, is one of our fly-in photographers.

We page Jim and shortly he is on the phone to Paul Schultz, Senior Vice President of Enstrom Helicopters (and a long-time EAA member). The Enstrom plant is located right on the field . . . and the triangle formed by Menominee's three runways would make a perfect turnpoint . . . and, sure, we will be happy to help out. Almost sooner done than said.



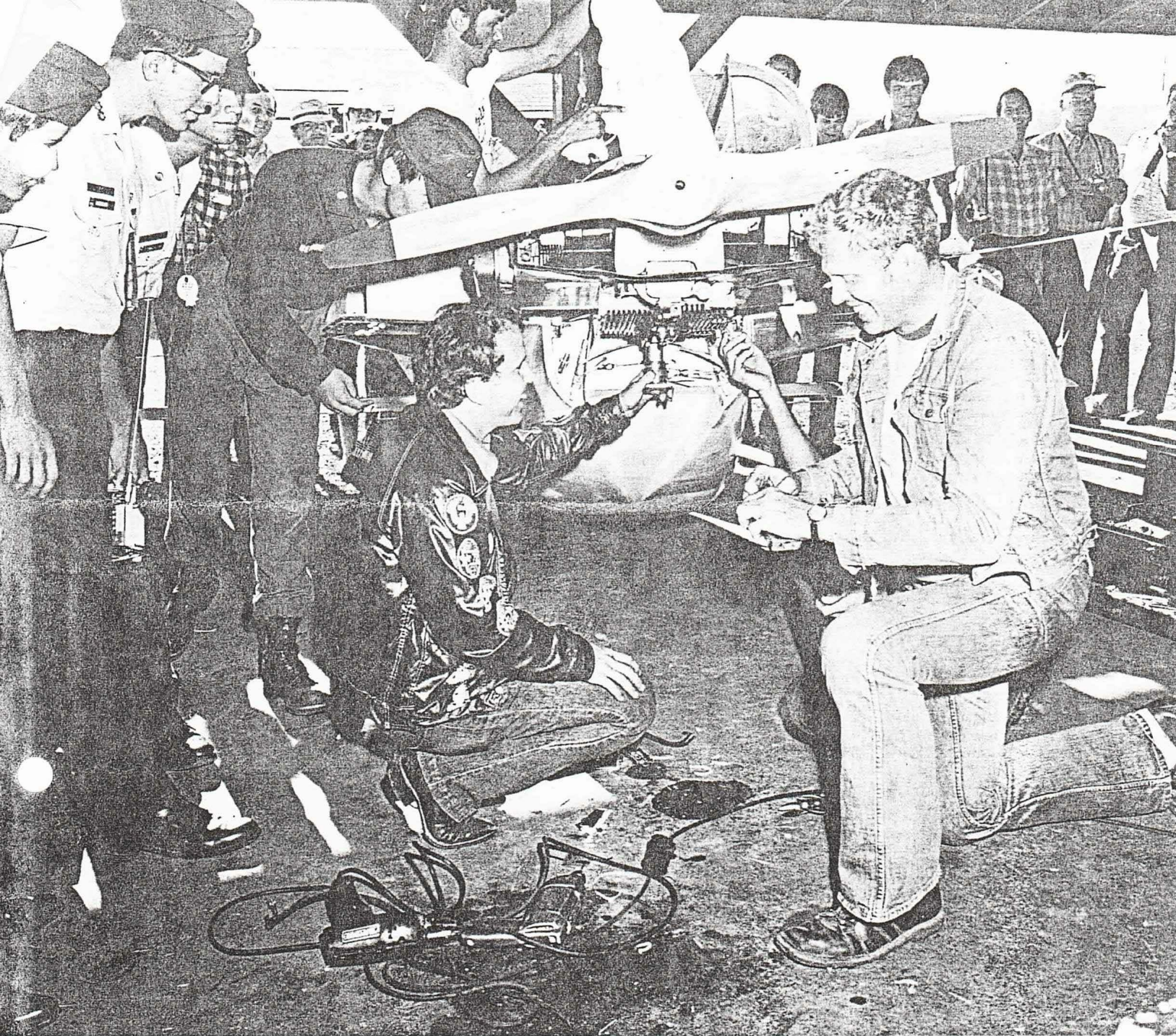
(Photo by Jack Cox)

Down and out in Green Bay . . . temporarily. Dick checks the pump can to see how much oil he had remaining. This last minute addition allowed him to make it back to the Green Bay airport after the engine dumped its normal oil supply. Dick did a tremendous job of dead-sticking the heavily laden little VariEze.

(Photo by Jack Cox)

Silhouetted against the first light of dawn, Burt Rutan reaches for the propeller to set the days events into motion.





(Photo by Lee Fray)

John Monnett, kneeling, left, and Mike Core, right, are laughing now, but 12 hours later — after working straight through the night — both were beat. They installed John's personal Sonerai I engine so a second record attempt could be made.

Now, if the weather will cooperate . . .

Saturday morning started at 4:30 A.M. for those of us involved in the launch. A quick breakfast for some of us, none for others, and it's off to the airport . . . with one eye on the somewhat low overcast, the first since the fly-in started. The weathermen say some scattered showers and maybe a thunderbump to fly around before the day is done, but ceilings should be VFR. The weighing, sealing of the tanks and barograph, etc., proceed under the direction of David Scott and, presently, the buzz of the VW is causing heads to peep out through tent flaps in the campground.

As Dick taxied out, Burt ran by and yelled,

"Jump in the back of the VariViggen and we'll pace him the first lap. Be back on the ground here at 7:30."

I dashed for my camera and hopped in behind Burt, who already had the Lycoming turning. Taxiing out to the end of 18, we lined up behind and to the left of the VariEze and followed him down the runway . . . at a distance that left us some place to go in case he had to abort. It was difficult to see much of the VariEze's take-off from the rear 'pit, but it was long and climb wasn't initiated until a real head of steam had been built up. We were already off and climbing, but when Dick started a climb-

ing turn back to the northeast, we seemed to be settling as he zoomed up. Burt kept yelling something about how he couldn't catch up, that we were at full throttle, etc. Also, he was laughing a lot.

When Dick throttled back to 3075 rpms, we were gradually able to catch up and finally pulled alongside, indicating just over 130 mph. We then slid up under the VariEze for a look at the engine and were greeted by a chilling sight . . . a brown streak, at least two inches wide, streaming back from the air inlet all the way back to the prop hub. Oil!

Some antimated radio conversation between Burt and Dick resulted in the hopeful conclusion that perhaps the oil was merely residual spillage in the cowling — because all the instrument readings were comfortably in the green. But we would keep a close watch the remainder of the lap to determine if the streak became wider or darker.

On we speed, over Neenah, Menasha, past Appleton, over Kaukauna, up U. S. 41 to Green Bay where we can see Packer Stadium and wonder if Bart Starr is already whipping his charges into shape at this early hour. As we speed up the shore of Green Bay the overcast begins to break up and by the time we are approaching Menominee, shafts of sunlight are creating luminous, shimmering pools on the otherwise drab green surface of the Bay.

Sweeping around the easily spotted airport, we see Paul Schultz, Joe Gyp and others spreading a white sheet near the Enstrom helipad, indicating a confirmation of our pass. Burt has also received the good word via Unicom.

Turn completed, we head southwest toward Oshkosh. Sliding in under the VariEze for perhaps the tenth time, we can detect no change in the size or color of that ugly streak on its belly. As the landscape slides so rapidly beneath us, it is easy to believe our assumption that the oil is spillage . . . merely spillage.

Over the city of Green Bay, the overcast becomes solid again and as we proceed down towards the north shore of Lake Winnebago the area ahead of us darkens dramatically. By the time we are over Kaukauna and Little Chute, we are in light rain and the ceiling and ground fog that has materialized from nowhere are ominously close to what will be an illegal merger for Burt and I in the VariViggen. We push on for a couple of minutes, but when the near all-white VariEze starts pulling momentary disappearing acts on us, we know we've been had. A quick call to tell Dick to follow the dual lane road

south rather than following a coastline he sees to the west — that's Lake Butte Des Morts — then Burt takes full advantage of the Viggen's turn-on-a-pin-head capability and we are headed back to Green Bay airport. Somehow Dick gropes his way through to Wittman Field, gets confirmation on his turn and starts back north behind us. One lap completed.

Burt and I race the rapidly advancing line of crud back to Green Bay's Austin Straubel Field, land and dash into the FSS to see what th' heck has gotten the weather god's bowels in such an uproar. About 15 minutes later, I stepped outside into a light sprinkle and was greeted by,

"Hey, where were you guys when I needed you?"

To my utter astonishment, I turned to see Dick Rutan striding up the walk.

"Weather?"

"No, just blew the engine about 20 miles north of here. Made it back by pumping the extra oil we installed last night. Dead stuck in here."

"Dead stick . . . with all that fuel on board?"

"Had to, the oil pressure was reading zilch. Thought you guys would come running out to help . . . had to push th' little beast in to the ramp from out there in the middle of the runway."

We walked back into the FSS, turned a corner and confronted Burt. "Thunderstruck" is a pretty good adjective to describe the look on his face when he saw Dick. Out again into what had now become a light shower of rain, we trudged out to the VariEze and hunkered down to view the oil soaked belly.

All the effort, all those people at Oshkosh and Menominee who have helped out . . . and here we stand watching oil drip-dripping onto the pavement.

"Well, the weather probably would have zapped the flight anyway."

With the downpour getting worse by the minute, some kind gentleman drove out and invited us to push the VariEze into his hangar, which we gratefully accepted. Pulling off the cowling we find . . . absolutely nothing. No gaping hole in the case where a rod has smashed its way out, no ruptured hoses, nothing. More probing leads to the conclusion that the VW had spilled its oil out the number 3 cylinder, but it was impossible to say from what specific point because the entire lower side was covered with the stuff.

I suppose for some this would have been sack cloth and ashes time, but not so with Burt and Dick. Conversation immediately turned to where and how they could get a new engine and be ready to go MONDAY MORNING(!). With all the engines at Oshkosh, there's bound to be one that can be used, is the reasoning. It can be installed tonight, test flown tomorrow and be ready to go Monday morning. . . . sure, now all I have to do is run two hundred yards through this rain to the terminal, call Golda and tell her to start a search for a basic VW — try John Monnett — and, by the way, send someone after me. Burt is calling his father who will launch a trailer for the VariEze.

In your ear, adversity.

By various means, all of us got back to Oshkosh during early afternoon — in my case, two old friends from North Carolina, Swanson Poer and Roger Jennings, drove my car to pick me up since I had to get back to work. Roger had made a stab at flying up in his IFR Tailwind, but when he attempted to file, the stack up of clearances was so great that driving was quicker. Everyone was trying to get into Oshkosh that morning!

Golda had John Monnett waiting for me when I walked in the door at Press Headquarters. Sure, he had a brand new engine in his booth, ready to bolt on . . . but it was **brand new**, no run-in time, the mags would have to be timed and it had a Posa injector carb. He had a better idea. An hour or so later we caught up to Burt who had finally managed to get the

VariViggen back to Wittman Field, and right there in the middle of the busy display building floor John laid a deal on him that was impossible to refuse.

"I'll send a couple of my friends down to Chicago tonight, have them remove the engine from my pranged Sonerai, fly it back, and my crew will work all night installing it in the VariEze so you can start test flying tomorrow. With a new engine — any new engine, you can't be sure what you have for the first 20-25 hours. With my engine, I know what you've got."

The Godfather couldn't have topped that.

In late afternoon the VariEze arrived on a trailer loaned by the world's foremost airplane hauler, Molt Taylor. Burt's father and mother, George and Irene Rutan, and his Mojave sidekick Gary Morris had done the honors. Bill Chomo had the

John's bent bird. It was after midnight when they returned with the vital organ John and Mike Core would spend the remainder of the night transplanting in the pallid body of the VariEze. (It should be pointed out that the Ted Barker engine could not be repaired or replaced because although Ted was present and had worked with Burt since the arrival of the VariEze, he had not brought another engine with him from California.)

most. It ran, but Burt was not happy with the characteristics of the Posa injector, so off with the cowl, off with the Posa and on with the Barker engine's float carburetor. Whoops! The intake plumbing doesn't fit . . . and it's Sunday. Probably the only place in the U. S. that day with all sorts of aircraft hoses and hardware for sale was the EAA Fly-In. A scouting party soon turned up the needed bits and pieces and again the VW was fired up . . . this time to Burt's satisfaction. Within 30 hours of Dick's dead stick landing at Green Bay, the VariEze was winging its way around the fly-by pattern at Oshkosh.



(Photo by Lee Fray)

engine workshop ready for major surgery and the Monnett crew had scrubbed, laid out their tools and were ready to operate. All they needed was an engine.

After no little searching through the vast EAA grounds and not infrequent lapses into the fringes of sheer panic as darkness settled in, Sonerai builders Charlie Terry of Long Island — who just happened to have his Mooney on the field and Vance Graebner were located and immediately dispatched to Du Page County Airport to remove the engine from

By sunup two very weary bug doctors had completed their work and were ready to look for some breakfast and a couple of beds. Burt could handle the final closure, cleanup and bandaging. Throughout the morning the Rutans and the Monnett crew — Bob Hughes, John's father, John, Sr., and Gregg Erikson — applied the finishing touches. Finally, the moment of truth arrived. Considering the drama of the past 24 hours, it was almost disappointing when the engine simply fired right up and ran like it was supposed to . . . well, al-

Sunday . . . back together after the engine change.

One last dollop of adrenalin remained to be squeezed out of the situation . . . after landing, Burt eased off the runway, came to a stop, shut down and climbed out to inspect the nose gear leg. The earlier fix had not been enough — a crack had developed. No big deal, however, as the repair, including an additional wrap with glass cloth, took only an hour or so. Most of that was curing time.

At dusk all that could be done had

been done, so everyone involved headed for bed. A 4:30 wake-up call would be much harder to take this time around. Come morning the same cast of characters would greet the rising sun, save for Dave Scott who would have to leave for home during the day. He had deferred to Harold Best-Devereux as NAA/F.A.I. Official Observer.

And that's how we came to where we are . . . standing around or absently walking over to look at a couple of homebuilt, waiting, watching for the VariEze to return. Then, finally, there it was . . . the VariViggen. Can't see the VariEze yet, but the "mothership" must be leading it in. Yep, there it is! What a beautiful sight!

After swinging wide around the Oshkosh tower where Harold is standing by to confirm the turn, Burt peels off and enters the landing pattern. Good sign! The VariEze must be O.K. if Burt is letting him head back for Menominee. In seconds the razor has disappeared again to the northeast.

When Burt and John taxi in, we descend upon them for word on the VariEze and they report that all seems well. Now they join the ranks of the watchers and waiters. We busy ourselves with the statistics of the first lap:

* Airborne at 5:55 A.M.

* Over Oshkosh Tower at 7:20, according to Harold Best-Devereux's watch — an hour and 25 minutes to cover 182 miles.

That's 128.5 mph and includes the

climb-out from Wittman Field. Before landing, Burt has gotten fuel consumption numbers from Dick by radio and he seems concerned . . . but he isn't saying much.

"We'll see how it looks on the end of the next lap."

Lap two ended with Harold Best-Devereux's, *"Mark, 8:44."* That was one hour and 24 minutes — 130 mph.

"Too fast," says Burt.

He uses the VariViggen's radio to order a power reduction — from 3075 rpms to 3050. His brow knits a little deeper when he hears the fuel consumption figure for lap two.

More waiting. My major diversion is getting Dick Stouffer and Carl Koeling set to launch our T-34 photo plane to intercept Dick as he completes lap 3 and fly with him on lap 4, getting air-to-air and shots of the Menominee turn point. We have also briefed Arv Olson and his co-horts in the Communications Center so they can alert everyone at the fly-in when the VariEze zips over.

"Ladies and gentlemen, the Oshkosh Tower has just established radio contact with the VariEze. If you will look to the northeast, you will soon see this aircraft completing its third lap."

That Arv is on the ball!

We all stand transfixed — watching Carl make a near head-on gunnery run on the VariEze, passing under, up and around to fall into formation with it.

(Photo by Jack Cox)

Weigh-in for the record flight. It's about 5:30 a.m. and a long, long day lies ahead.

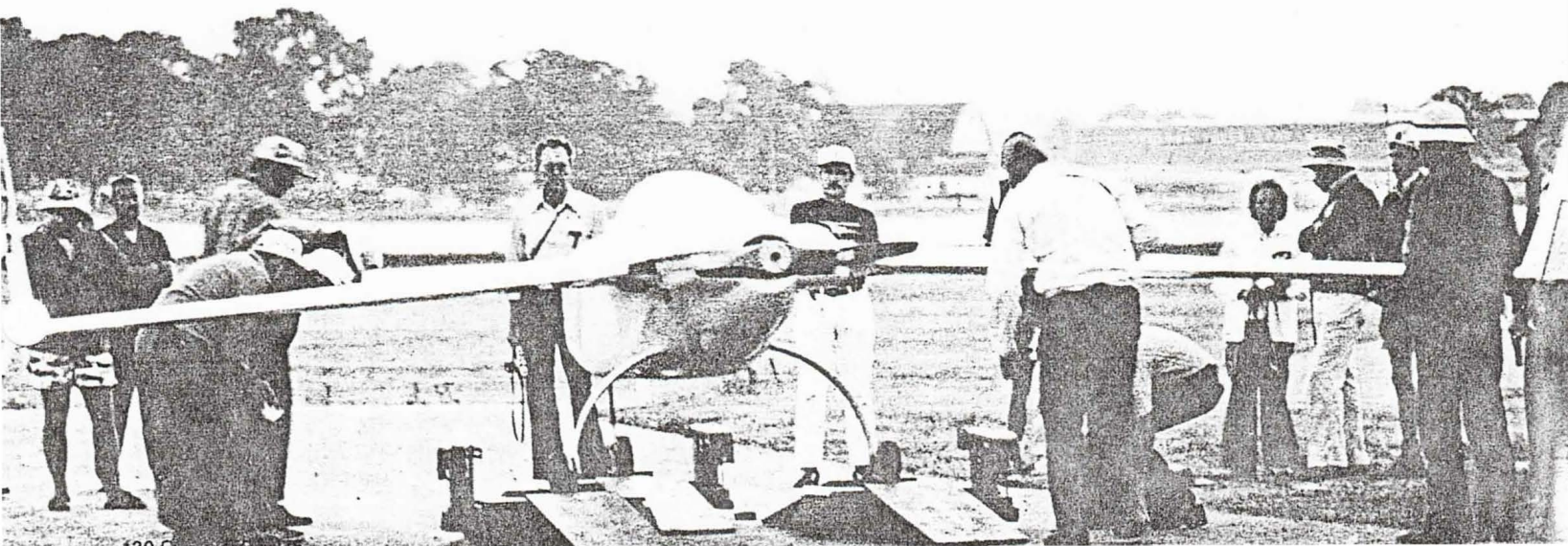
What th' . . . hey . . . look, the VariEze is turning back. No . . . **No!**

"Missed his verification!" yells Burt.

Damn! The turn over the tower had been a little too close in and despite running out and leaning over the rail, Harold simply had not been able to see past the overhang of the roof to spot the tiny VariEze. This time the turn is wide and Harold is able to verify. Only about 4 minutes are lost, but Harold decides that he may spare all of us possible cardiac arrest if he moves his vantage point to the Control Center and uses the tower as a marking pylon on future laps.

With the extra turn around the tower, lap 3 consumes one hour and twenty-nine minutes — 122 mph. Still not bad. By the time we have this figured out, the VariEze and the T-34 have disappeared, well into lap 4.

"Ladies and gentlemen, the VariEze is again approaching Oshkosh. Pilot Dick Rutan is completing lap 4 and will be beginning lap 5. When he passes over the Oshkosh Tower, the VariEze will have passed the halfway point toward breaking Ed Lesher's record. 9 laps are required to set a new mark." Arv is definitely



(Photo by Dick Stouffer)
 WE DID IT! Left to right, Paul and Audrey Poberezny, Dick and Burt Rutan, Harold Best-Devereux and Bill Turner.



warming to the task.

"Mark 11:40." A one hour, 27 minute lap — 125.5 mph. Burt doesn't look quite as worried over the fuel situation.

"Mark 1:09." One hour, twenty-nine minutes — 122.5 mph. Funny, the mid laps seem to be going past faster than at the beginning. Complacency? . . . or is hunger dulling the senses? It's been eight hours now since breakfast.

"The VariEze is inbound again. This will be the completion of lap 6. At the turn, the VariEze will have covered 1092 miles. This is the first time a world's record has been attempted at an EAA Fly-In. We invite everyone to stick around this evening to greet Dick Rutan when he completes the flight." Now, that's confidence for you.

Harold's "mark" had caught Dick rounding the Oshkosh tower at 2:36 P.M. — an hour and twenty-seven minute time for lap 6. Same as lap 4. Obviously, wind is not a factor today.

"Mark 4:07. Two more laps for the record, gentlemen." Hmm, that's an hour thirty-one — 120 mph. A check with Burt reveals that, yes, he did slow Dick down again . . . to 2950 rpms. Fuel consumption?

"Yeah, it looks like we are burning a little more than we expected. Don't think we will be able to go the extra laps we planned. Running too slow now . . . but the record looks O.K. Know what? I don't think we had the tanks completely full at take-off. I couldn't believe the consumption on the first lap, but it has settled down some now."

So that's what was on his mind.

"Mark 5:37."

"Ladies and gentlemen, the VariEze has now completed lap 8 and has started the record lap. If all goes well, the aircraft will return over Wittman Field at just after 7:00 p.m. At that point Dick Rutan will have flown 1638 miles, 83.7 miles farther than Ed Lesh's 1970 record."

Decision time! While Arv Olson is keeping the crowd informed over the PA, Burt is busy taking data from Dick via the VariViggen's radio — speed, fuel remaining, temperatures, pressures — the decision has to be made now on trying lap 10 because now the race is also with the sun. The VariEze is not equipped with lights and a tenth lap at the present lap speeds would get Dick back around 8:30 — after official sunset. Is there enough fuel left to speed up?

The pressure is beginning to build again. Lap 8 took an hour and a half even . . . it sure seemed longer than that: 121 mph. Gee, look at the peo-

ple who are beginning to gather around the Comm Center . . . there's Ed Lesh. Boy, wonder if he had to go through all this getting his records . . . and he's done it eight or nine times! Ed is fresh from establishing a new record, himself. On July 2 he flew his Teal nonstop from St. Augustine to near Phoenix . . . 1835 miles, a new straight-line distance record. What a shame it couldn't have ended at Oshkosh during the fly-in so he could receive the plaudits of all his fellow EAAers — something he so richly deserves. Ed has closely followed the VariEze's progress all through the day and couldn't be more gracious about the possibility of losing one of his hard earned marks. That's class.

Wonder if Paul Schultz and the gang at Menominee are feeling the strain, too? So close now! (What we didn't know at the time was that during the latter stages of the flight, famed lawyer F. Lee Bailey, president of Enstrom Helicopters, flew into Menominee and witnessed one of the VariEze's turns. He reportedly was as amazed with the unusual profile of the little bird as the rest of us.)

"He's coming in this time!", somebody yells.

A dash to the Comm Center confirms it. Dick has decided to call it quits at the end of lap 9 — the fuel remaining is such that 10 laps would be slicing things too thin. There's a technicality that has to be kept in mind in these closed course record attempts . . . you have to land back at the same airport from which you started, otherwise all goes down the

Matched pair? This candid shot was snapped shortly after the completion of the record flight. Dick, left, is telling his wife, Geri, back in Tucson that he did it. Burt is telling John Monnett that his engine now has 13 more hours running time than it did the previous day . . . and a little history to write up in its log.



tubes. Dick has figured his fuel at the turn at Menominee and has told them via Unicom to call us regarding his decision.

"Ladies and gentlemen, the VariEze will land at the conclusion of the 9th lap - setting a new world's record. When the aircraft lands, everyone is asked to stay back behind the showline barriers. For the record to be official, Harold Best-Devereux, the official observer, must check the fuel tank seals and remove the barograph before the plane is disturbed." Arv gives 'em the word.

I get Harold and his son, Igor, in my car and drive out by the runway to wait. It won't be long now . . . in fact, a lot quicker than we realize, because we can see the crowd looking to the northeast. Thousands of arms are pointing in that direction. We are out of earshot of the field speakers, so they must know something we don't. Dick must have speeded up on the last half lap.

This time around he has the nose gear cranked down . . . hope it's locked, Dick. That's it, he's down! He's done it!

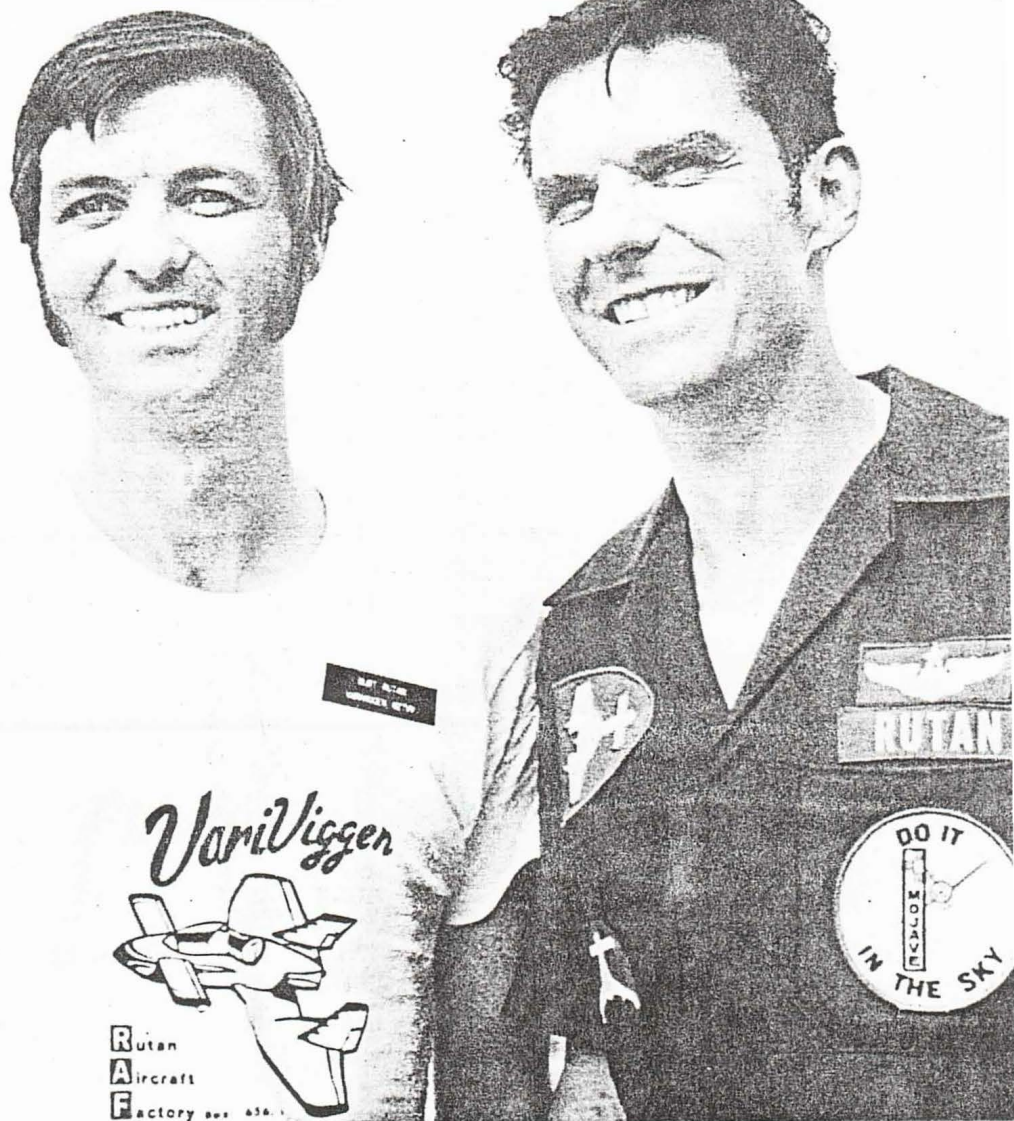
We'll celebrate later . . . now let's pace him in to the EAA area taxiway and get him stopped before he gets to the show line so Harold can get the barograph. Wow! look at the crowd. Everyone on Wittman Field must be lined up, watching.

Dick taxis back up the side of the runway and turns down the EAA access. Harold is out of the car now and is giving him the "cut" sign. Dick brakes to a stop and is lifting the canopy . . . and is greeted by a resounding cheer from his fellow EAAers. Harold gives him a fast hand shake . . . wonder if he said,

Sure enough, there he is. Harold's "mark" comes at 6:58 p.m., officially ending the course time. That is a 1:21 lap, the fastest of the day. Just over 134 mph. We will let the tower mark his official touchdown time and figure his total time in the air from that.

Just over 13 hours aloft is not enough to cool off Dick's enthusiasm . . . he has to do a high speed fly-by before landing on 18! He says the VariEze cockpit is the most comfortable he's ever sat it . . . must be true.

(Photo by Ted Koston)
Burt and Dick Rutan



"Jolly good," or some such English expression?? . . . and proceeds to dive into the rear cockpit for the barograph. Presently he emerges and hoists it over his head like a trophy won. More applause.

Paul and Audrey Poberezny step in to congratulate Dick, then Burt, his family and even wife, Carolyn, released at last from her week-long bondage in the Rutan booth in the display building. Then the line breaks and the VariEze is suddenly swamped with people. It's a good thing they are EAAers, for I'm sure otherwise the tiny bird would be broken to bits like a goal post by the souvenir hunters of other sports. As it is a few trophies are indeed taken. Dick pulls out his can of chocolate pudding to show what provisions he has left and immediately it is requested by an admirer . . . who also wants it autographed after the prize is his. This starts a frantic round of autograph signing by both Dick and Burt.

Ah, fame may be fleeting, but it's sweet while it lasts!

In the hours that followed, after the admiring crowd had finally drifted away, there came time to figure out some of the significant numbers — all subject to final NAA/F.A.I. verification and approval, of course. Dick was in the air a total of 13 hours 8 minutes and 45 seconds. The tower officially had him down at 7:03.45 C.D.T. The 9 lap course distance was 1638 miles, which, of course does not count the extra turn around the Oshkosh tower at the end of lap 3 or the "victory pass" at the end of the flight. After some close

checking, Burt Rutan finally figured that the VariEze had taken off with 46.5 gallons of fuel on board. 6.3 gallons remained when the flight was completed, so 40.2 gallons were consumed in the 13-plus hours. This figures to just over 3.1 gallons per hour for the day's flying. One pint of oil was used by the Monnett VW. The average speed had been 125.5 mph. These were tremendous figures for any small airplane, but more impressive when one reflects that the construction of the aircraft was started the last of January of this year and

that it did not fly for the first time until May 21. The months and years ahead will see the effects of the shock waves that are even now rippling out through the aviation world. We suspect they will be profound. Certainly it can be said, no home-built design . . . or factory design . . . has made such a spectacular start as the VariEze. It took a lot of help from Burt's friends to get the first record — and he is grateful — but to Burt must go the credit for daring to be different in the design of this aircraft, by asking so much of it so soon . . . in full view of so many people.

Standing there in the last minutes of daylight, I suddenly realized that it was all over . . . Oshkosh '75 was done. What a fitting climax to a fantastic fly-in!