

THE 'LANDSPEED LARRY' FORSTALL STORY:

EIGHTY-SEVEN SIT-ON BIKE RECORDS BETWEEN BONNEVILLE, ECTA MAXTON & LORING

By Bill Hoddinott

My friend Larry Forstall of Philadelphia has spent many years in land speed bike racing and chalked up an amazing number of records! In early years he was the rider, and about twenty years ago had a health reverse which forced him off the seat.

Since then, he has sponsored younger men on his bikes, and sometimes on theirs, such as the late, great Bill Warner, who ten years ago posted a staggering 311 mph from a standing start to 1.5 miles at a Loring, Maine event. Bill was riding his 700-horsepower turbo methanol Suzuki at the time, and Larry was one of his sponsors.

At 79 Larry is still going strong, with team plans to go to Loring and Bonneville this year, plus do some drag racing.

His story is also the story of his many friends with whom he has teamed and sponsored. This would include Jack Bromall, Brenda Sue Carver, Mark DeLuca, Steve Knecum, Dean Sabatinelli, Fred Vance and Bill Warner. We will also get something about the story of each one of them in this article. I reached Larry at his home in Philadelphia for the first of a series of weekly phone chats, to do a comprehensive story about the many facets of his lengthy career in land speed sit-on bike racing:

Bill Hoddinott: Larry, thank you for agreeing to another interview for the readers of the Bonneville Racing News. Many years ago, we did a story, but that was a long time ago, and I know you've been very active since then. Besides, I think it would be a good time now to do a comprehensive story. For several years you have set a good example to younger people who are devoted to this sport we love.

Larry Forstall: Bill, thanks for those kind words and you know I love to talk about land speed racing motorcycles! I'm only three years younger than you, but racing keeps me young!

Bill: Let's start back at the real beginning, Larry. When and where were you born, and what was your family like?

Larry: I made my appearance in November 1942 here in Philadelphia, Bill. My Dad, Edward, graduated from Lehigh University in 1920 with a degree in electrical engineering. He went straight into Bell Atlantic and stayed with them his whole career. My Mom, Helen, was housewife and mother to me and my sister, Carolyn. We always lived in the suburbs of Philly, and we had a comfortable life in the Ozzie and Harriet style. So, I was raised in a loving, secure, comfortable home and I know that helped give me confidence and a feeling of security ever since.

Bill: I remember Ozzie and Harriet and David and Ricky, the Nelsons, from the '50s TV show. Ricky went on to be something of a rock star for a while. Their family show exemplified the prosperity and optimism of America in the '50s. I was lucky to be raised in a very similar home myself. Had a lot of good examples in front of me and grew up feeling secure, loved, and confident which is what traditional marriage and family life is supposed to produce. I was born in Baltimore and raised in Asheville, NC, and Minneapolis. Where did you go to high school, and did you go to university?

Larry: I went to Haverford High School, and after graduation I went to Lehigh University. After three years there I dropped out, it was not for me.

Bill: What did you do, then?

Larry: Like yourself, Bill, I came along in the '50s when Hot Rod Magazine first came out and swept the country into a nation-wide frenzy of hot rod racing. After quitting university, I was glad to take a job in a local speed shop which was flourishing. We were selling aftermarket racing and hot rod parts to an eager market, and before long we added machine shop services so the enthusiasts could get their engines built and modified the way they were reading in Hot Rod.

By the '60s a lot of people like Don Garlits started touring the country to go to the big drag meets and also to local match race events where there was good appearance and prize money for them. A lot of them came by our shop when they needed parts and machine shop work, and I had a chance to get acquainted with people like 'Jungle Jim' Lieberman. These were interesting people.

Should mention that my late Dad was interested in the new hot rod movement and in 1960 on a family trip we stopped by Bonneville to watch the great Mickey Thompson make his historic 401 mph pass in Challenger 1! That firmly set the hook in my mind that someday I wanted to race at Bonneville. About 15 years afterwards, I fulfilled that dream. Tell you about that later.

Should also mention, to flesh out our family story, that as an electrical engineer for Bell Atlantic, my dad earned a salary maybe twice or more what middle class workers were making. Engineers are always paid well because their work is valuable to their employers. All kinds of engineers. Mechanical, electrical, electronic, civil, aerospace, any kind. There's a tip for any young people who may read this. If you can do the math, go for engineering!

Anyway, this good salary enabled my dad to engage in a lifetime hobby, which was investing in Blue Chip stocks on Wall Street. He was very successful with it. Dad was a good-hearted man who loved his family and friends and enjoyed excellent health right up to the age of 90 when he dropped dead while playing tennis one day.

Bill: As old ducks now, Larry, we know that would be an ideal way to make our final exit! Now tell me about your first foray into land speed racing.

Larry: In '75 I got a CB750 Honda Four engine out of a wreck and made this the basis of my first Bonneville bike. I was in way over my head but had high hopes. Got a Trackmaster racing frame and installed my engine it, after installing low-compression pistons and a water-cooled cylinder (kept the standard air-cooled head). Got an ARD mag for it and fitted a Rayjay turbocharger with a two-barrel sidedraft Dellorton carburetor to feed methanol. Got a racing fairing for it and did a huge amount of work putting all this together. I took it out to Bonneville by myself and it passed Tech inspection, but to my great disappointment, couldn't get it all to run enough to make ONE pass!

The trip was not a total loss; however, I did get to meet Burt Munro of New Zealand, of "World's Fastest Indian" fame. He had retired his Indian streamliner by then but was a very interesting man to talk with. I also got to watch all the other car and bike racers and looked at their equipment, so I learned a lot.

Bill: Learning to run a car or bike at Bonneville is a steep learning curve for everyone, Larry. This is a good break point for Part 1, and in the next Part we'll look at what you did next at Bonneville.

Part 2

Bill Hoddinott: What was your next effort at Bonneville, Larry?

Larry Forstall: In '76 I got a 500 Honda Turbo which was stock and ran that at Bonneville the next four years up to '79. I did set a USFRA class record with it. Started out with 139 mph and got it up to 145. The impression that remains with me from that time was how welcoming everyone was. The fellowship at the Bonneville meets, whether SCTA or USFRA, was wonderful!

In '81 and '82 the meets were rained out. By '86 I bought a new Suzuki GSXR 1000 (it was actually 1040cc) and got serious about racing it to Production class records. Had Vance and Hines port and polish the head. This was an air-cooled 4-valve engine which had limitations, especially overheating between the two exhaust valves, but the factory engineers had tried to address that by arranging squirters to oil-cool the pistons.

Bill: You've put your finger right on an interesting technical point, Larry, the limitation of heat in the head between the two exhaust valves in a four-valve air-cooled engine. I recall that the Horner Brothers in Australia made a four-valve air-cooled head conversion for the two-valve Vincent-based racers they made and ran into trouble in sustained track racing conditions with overheating between the two exhaust valves. As I understand it, this caused trouble with the valve seat inserts coming loose, or something like that.

Reaching far back in time, I recall the Honda air-cooled four and five-cylinder racing engines of the '60s had four valves per chamber, and they were very successful, but maybe they had some other arrangement for the valves such as a cast-in "skull" in the heads for the valves to seat on. The cast-in bronze skull was an idea the Brits had come up with in the 1930s, but it had its own limitations. Honda ran these Fours and Fives in various sizes to World Championships, but I feel sure they had to limit the power and heat outputs of them.

The idea of cooling the piston crowns and thus the combustion chamber by squirting oil up into the crowns from underneath, goes clear back to WWII for aircraft engines, and my '07 Cadillac STS-V sedan with the supercharged Northstar V8 had that trick built into it by the factory engineers. I understand the cooler piston crowns that resulted actually enabled the engineers to lean down the cruising fuel mixture for better fuel economy.

Larry: As a Production class racer that first year, Bill, the bike was successful in setting a 166 record. So, I was getting my first taste of some real speed, and success.

For the next ten years up to '96, I kept racing this bike and adding better cams, higher compression and put 30 more mph on it, up to 196 by '96. By this time, I had changed to methanol to keep it cool. The best time I had with it one-way at Bonneville was 199.8.

Bill: What kind of fairing were you using, and how was the handling?

Larry: The stock fairing, and when I got to about 190 mph, the standard frame did begin to show scary handling. The steering became vague, and the bike hunted back and forth, which gave the rider the feeling it might get out of control. Not a good feeling at that speed. The course surface was variable year to year and that had something to do with it. You realize on salt or dirt the front tire has only so much grip, compared with pavement. I was advised to rake out the front fork angle 5 degrees, and that proved to give an amazing improvement! The steering felt safe and stable once again.

Would like to tell you, to back up a little, that in '93 I got real ambitious and decided to build a bike with TWO of the GSXR-1000 engines! I got a local shop who built drag racing car bodies to build a custom frame which could hold them. I got the bike built and took it out to Bonneville twice in '97 and BOTH meets were rained out! I stored it for years but then sold it to Scott Beirsto in Canada and he plans to run it this year ('22) at Speed Week.

In '98, I had a BIG personal setback!

Bill: (Note: what follows is a story of grim pain and suffering, but it had a happy ending, so we include it here since it might help a reader who finds himself facing a similar ordeal) Uh-oh, what happened?

Larry: Came down with inoperable CANCER in my spine, and I was in REAL trouble! Fortunately, I got in touch with the RIGHT oncologist, Dr. James Bond, who told me my only chance was a VERY severe series of chemotherapy treatments to kill the cancer. The doc told me I was facing a CRISIS and he would LEVEL with me. Told me I had two choices. Do nothing and I would be dead in a few months after prolonged pain and suffering they could only treat with morphine. Or Choice #2, take the harshest course of chemotherapy they had for six months, and he would estimate I had a 55/45% chance of full recovery. The treatment would entail the first week of each month in hospital for the chemotherapy IVs, then three weeks at home for recovery. Then the same thing the next month, for six months total. There would be plenty of unpleasant side effects of the chemotherapy, and all of my hair would fall out, but if I recovered, it would grow back.

Here I was, in my mid-50s, and what was I going to do? FIGHT cancer and take the 55% chance of recovery! The chemotherapy made me very, very sick, and during the whole six months, that "55%" was in the front of my mind. But my wife Elaine nursed me faithfully during this terrible time for both of us. Years later when she came down with lung cancer, I did the same for her in similar circumstances.

Thanks to the knowledge and skill of Dr. Bond, bless him, I DID get through the treatment, and DID make a full recovery, my hair grew back, and I'm still around today at 79 to tell you the tale!

Bill: What was next?

Larry: After recovery, the moment of greatest GLORY of my life came along in 2000, because the Suzuki 1300 HAYABUSA came along! As we all know, this bike was a TURNING POINT, A BENCHMARK in the whole history of the world motorcycle movement, back to the year 1900 or so! There was NEVER anything like it offered to the world market before! It appeared in 1999 and thank God, is still built today. Many, many of them have been sold as a street sport bike, and many of them have been used for racing, whether near-stock, or modified up to turbocharging with methanol like Bill Warner's 700 horsepower one that did 311 mph in a standing 1.5 miles at Loring back in '14!

Anyway, in 2000 I bought a new Hayabusa and leaving it completely stock, except replacing the silencers with aftermarket units, took it to Speed Week and ran it in MPS G 1350 class. The result was I set my class record at 200.490 mph and got my RED HAT, my entry into the Bonneville 200 MPH Club!!!! This was a PEAK MOMENT of my LIFE, something I had wanted for 25 years, and at last, it had come!

On the second pass for my Record, since my vision then was not very good, I had hit the Six Mile marker with my arm, and hurt it some, but not badly. Should mention here that I had also brought another Hayabusa with me that was enlarged to 1400 cc, to run in 1650cc class. Since I couldn't ride this now myself with my bad arm, I offered it to Scott Guthrie, and he jumped on it and set a class record himself! In fact, he liked it so much, he asked if he could BUY it, and we made a deal!

Bill: Okay, what was next?

Larry: I liked the new Hayabusa so much I bought another one and had Bob Carpenter put a street turbo kit on it. This turned a super-fast sport bike into an INSANELY fast sport bike, WAY too much for the street or road because there was no place you could turn it on safely, and it scared me to death if I gave it too much throttle! That year, 2001, Steve Knecum and I became friends, and we took the street turbo Hayabusa to an ECTA meet at Maxton. Steve rode the bike and it set the Maxton track record at 225 mph in the standing mile. The next year Steve raised the same record to 235 with the bike.

Later I repaired one of the new Honda CBR 600 water-cooled four-valve four-cylinder bikes and started running it in naked class at ECTA. This was about seven hours from home and much easier than going out to Bonneville. The people at ECTA were nice folks and there was a fine fellowship there, which I enjoyed. The 600 was a good bike and I ran it about 148 in the standing mile there. Steve Knecum and Mark DeLuca were teaming with me by now and they got even more out of this bike, 157 or so. This was all good but in 2004 I ran into another BIG personal setback at an ECTA meet, which I had come down for by myself.

Bill: Which was?

Larry: As you know from racing your Arduin roadster there, Bill, the paved airport course was kind of bumpy, and slammed the rider or driver around a bit. To back up a little, for years I had only had one really good eye, the other was not so good, but I was able to see well enough to keep a driver's license and to race safely. Now on this occasion, my good eye went bad on me during a pass down the track! Went back to my pit, and I didn't know what was wrong with it, but I could hardly see. I didn't tell anybody because I figured I could take care of this by myself. Decided I would just head home and pull into a motel and rest overnight rather than go straight home. Only thing was, all the motels I came to heading up I-95 were FULL! So, there was nothing for it but to just keep on going far into the wee hours of the morning, 15 hours hardly being able to see, until I finally pulled into my driveway at home, more dead than alive.

Next thing was to find an ophthalmologist who could figure out what was wrong with my eye, and fix it, and that proved very tough. The first one I went to really didn't know what was wrong, and it seemed like he just wanted me to keep coming back and paying his fee, indefinitely, with no results or resolution. Finally quit him and got a better one who diagnosed that I had had a hemorrhage in that eye, and it would straighten itself out in time. Which it did, but my vision never recovered well enough to feel safe riding a race bike again.

As I said above, by this time my pals Steve Knecum and Mark DeLuca had come into the picture, and that started up a whole new world of team sponsorship, which has enriched my life ever since!

Bill: Okay, this looks like another good break point, and in the next Part, we'll get into that.

PART 3

BRIEF SKETCHES OF TEAM MEMBERS BY LARRY FORSTALL (in alphabetical order)

JACK BROOMALL

Jack was a retired Chrysler engineer. He lived nearby and in 2005 contacted me to see if he could

visit. He wanted to race at Bonneville.

We met, and I answered his questions, and I saw at once he was the kind of person who would do well on a racing motorcycle.

Jack had a 750 race bike built and ran it first at ECTA Maxton, for training and practice. He then took it to Bonneville and set a Production 750 class record which still stands!

He set several more records over the next few years and in '10 I offered him the use of my stroker 1650 class 'raked' Hayabusa. Having never ridden the bike he made two passes and got his Red Hat at 200.8, a record which still stands.

In '12 Jack bought a new Kawasaki ZX14-R and I designed a modest engine for him to run at Bonneville. This was my first experience with the 1400cc Kawasaki which had a one-piece crankcase top half and cylinder block (you realize the Hayabusa has always had a separate crankcase and cylinder block and that was what we were used to). Steve Kneecum built the engine to his usual high standards and Jack set the Production class record at 205.3 for the Forstall and Broomall team. We expected more but the course was damp that year, so he was getting tire slip at high speed. The tire just couldn't push the bike any faster against the air load. Jack tried again the next year, but the course was no better. But his '12 class record still stands today. Jack remains one of my closest friends.

BRENDA SUE CARVER

Brenda Sue, of Texas (as was Fred Vance), had ridden street bikes and made a few runs on a borrowed Hayabusa in late 2011 when Fred invited her to join the Vance and Forstall team. Her first team event was at the '12 Loring meet. She rode the team's Bonneville 1350 Hayabusa record bike to an amazing 221.5 speed for the 1.5 Mile. Impressed with that Fred asked her to ride it at Bonneville that September. She had never raced on salt before but conquered the totally foreign surface to become one of the few women in the Bonneville 200 MPH Club riding against the wind to a 200.750 record and got her Red Hat.

In 2014 she stepped up to our more powerful 1655 engine and did a speed of 227 at the Texas Mile. The pinnacle of her career came on April '15 at the Mojave track in California. In one run she set TWO records which are still the best ever for an all-motor (no turbo) bike on pavement: 234 Mile and 239.6 at the 1.5 Mile.

Her final race was at Loring in the Fall of '16. Riding a full-aero Hayabusa she was clocked at 223.7 in the Mile before suffering a horrible life-threatening crash. After a long hospital stay and recovery she is now back to normal life with the aid of a modern prosthetic. We wish her all the best.

MARK DeLUCA AND STEVE KNECUM

My two closest friends and long-time team-mates. Mark and Steve are both in their early '50s now and we got acquainted in 2001. Mark DeLuca has a one-man shop devoted to detailing high-end cars for an exclusive clientele who bring them to him on a regular schedule for meticulous cleaning and detailing inside and out. He is in demand for this work and makes his living at it. Mark and Steve are very similar in their love for high-speed sport bike racing and the first time I saw them running down the course at ECTA Maxton, I saw by their 'tucks' on the bike and their perfect riding styles, getting every ounce of speed out of whatever they were riding, they were both what are called "NATURALS"!

Steve Kneecum has a nationwide reputation as a race motorcycle engine builder and works on them in his home shop three days a week for his customers. He has built every one of the racing Hayabusa engines I have ever been involved with, up to and including Bill Warner's 700 horsepower turbo Hayabusa that did the 311 record in the 1.5 Mile at Loring. Steve also works for a dealership shop as a technician for three days a week. So, Steve is a true MASTER builder of racing motorcycle engines. Steve became the first to be officially timed over 250 on a Japanese-powered (turbo Hayabusa) sit-on motorcycle in 2003 at Bonneville. He set two records of 242 and 243 mph that year.

Steve and Mark and I have raced at Bonneville, Maxton, and Loring many times and have a lot of records in the book together. The first event ever at Loring was in '09 and we took three bikes to it. We set records with all three bikes and Steve rode our naked turbo Hayabusa to a 248 record in the 1.5 Mile. You realize this was early days for the turbo Hayabusa and we went much faster in later years, as I'll tell you.

I remember some very special moments with Mark and Steve. Let's go to Mark, in 2010 at Bonneville, when he rode "The Guppy" I designed and had built. You can see from the photo this was a rather exotic bike. The engine was a 1700cc Hayabusa, set up for gas, no turbo, and he rode it at 252+ at the meet.

I'm rather proud of "The Guppy." Instead of the normal radiator for water-cooling, I designed a six-gallon water tank that sat behind the engine, and it was made of 1/8" sheet steel. I wanted the weight of the tank and the water in that location for weight distribution and ballast. The regular engine water pump circulated the water through the engine and the water tank and there was an auxiliary surge tank to handle any overflow. No thermostat was used, and the water never got very hot. We ran the bike only to the 4-mile marker, it was at maximum speed before the 3-mile marker so we could use the timing from 3 to 4 and then shut off. The engine ran at 11,000 rpm at maximum speed and had a big bore and a long stroke. Could have used more revs but we wanted to minimize the wear on it. "The Guppy" had a rigid rear end, and just about an inch of travel on the front forks.

DEAN SABATINELLI

Dean is a late addition to our team, in July '21, when he rode our unstreamlined Hayabusa to a 224.5 mph record in the 1.5 Miles at Loring. He rode our team's all-motor (no turbo) naked bike on gasoline. To my knowledge this is the fastest all-motor naked speed ever officially timed.

Dean is a professor at the University of Georgia and had raced fast bikes for many years before joining our team. He started with drag bikes and got acquainted with Steve Kneecum and Mark DeLuca on an online Turbo Hayabusa forum. He met them at ECTA Maxton in I think '07 when he had changed from drag racing to LSR. He has also teamed with Scott Guthrie, and they have some records in the Bonneville book. Dean is about the same age as Steve and Mark which is a good one for the best combination of experience, knowledge, judgment, energy, strength, agility, determination, and... courage! I don't have to tell readers it takes plenty of courage to ride race bikes in this speed range. I know some Bonneville car racers who have set records in the 300 and 400 mph range, who have told me they wouldn't care to get on these bikes. But to my mind, one type of vehicle takes just the same kind of courage as the other since the consequences of a high-speed crash can be the same. In fact, the sit-on bike has the advantage that if you come off at high speed, most likely you will just bounce down the course until you stop, with little or no injury, thanks to your protective gear!

FRED VANCE

My first contact with Fred was in '08 when he was on an online Suzuki site asking about Bonneville racing I told him how much fun it was and he took his stock Hayabusa there the same year. He went 190 and was hooked! That Fall he started asking about more power and the 200 MPH Club. After many calls and emails, he flew up to meet me. We share the same birthday, and I was one year older. I took Fred to meet Mark DeLuca and Steve Kneecum, and engine builder Bob Carpenter. Little did I know what lay ahead!

For '09 we decided to use a Carpenter head and cam package with a stock Gen 2 Busa bottom end. I loaned Fred my Production mufflers from which my friend Bill Cross had removed the baffles and installed straight pipes (which is allowed in Production class). It worked! With help from Austin, Texas tuner Johnny Cheese, Fred set the Bonneville Production 1350 class record three times with a final of 211.5 which is still in the book, and got his Red Hat!

In '10 and '11 Forstall and Vance ran a de-stroked 1350 Hayabusa of my design built by Steve Kneecum. In those two years Fred and his team set all nine SCTA unblown class records, and he is the only one who has ever done that!

Fred passed away in '18, may he rest in peace.

BILL WARNER

I believe we all have to recognize the late Bill Warner as THE UNDISPUTED ALL-TIME KING OF THE LSR SIT-ON BIKE RACERS! No-one has ever surpassed the amazing 311 mph record he did at Loring in the 1.5 Mile in '11 with his turbo Hayabusa methanol bike. It is believed to have produced all of 700 horsepower. In '13, sadly, Bill lost his life in a crash when attempting to do 300 mph in the Loring Mile. His dream was to do that and retire. But it was not to be.

I first met Bill in March 2010 while vacationing in Clearwater, Florida. He had met Steve, Mark and Dean the previous year as competitors at ECTA Maxton. During the prior years he had raced a Yamaha. Vee-Max at Maxton and tried for years to get it to 200 mph, but finally did.

Bill took me to lunch and then to visit his transmission builder and painter. We talked about LSR, and I was impressed with his attitude and confidence, without ego. I offered him some minor sponsorship and we had frequent phone calls as his successes began. He already had his turbo Hayabusa going, and Steve Kneecum was building his engines. That year he did the all-time fastest speed record for car or bike at Maxton, at 272 and that began his three years of unparalleled success.

I should mention that there are some excellent videos on YouTube of Bill with his bike at Loring, which tell you a lot. Check them out if you can.

Let me tell you about Bill's 311 mph engine, that was built by Steve Kneecum. The plan was to turbocharge it very heavily and run methanol for its cooling value and pull very high power out of it. You might think this meant a big bore and stroke to get a big engine. Not a bit of that! Bill wanted to keep to the stock bore and stroke of 81 x 63 mm for the stock 1298cc of the early Hayabusa. His reasoning was to keep the strength of the original structural parts to contain the tremendous cylinder pressures with reliability. High power is no good if the engine structure can't hold up to it mechanically.

The original water-cooled cylinder block was replaced with one with a solid cylinder block casting. Methanol fuel cools so well the water-cooling was superfluous, and the solid block had much

higher structural strength. The original water-cooling for the cylinder head was retained. The original cylinder bolts down through the head and block into the crankcase were discarded. The crankcase bolt holes were re-tapped to suit 1/2 NC steel studs specially made by ARP. This was necessary to hold the head and block steady under the very high combustion pressure, combined with a MLS head gasket and no less than 100 lbs ft of torque on the nuts. The very large turbo used gave up to 31 psi of boost. This was the combination that resulted in this extremely high power and speed.

Here I think I have to send a FRANK message out to readers, that I believe there are limits to what can SAFELY be done with sit-on bikes in terms of power and speed. We have already seen that today's technology can push them up into the 300+ mph range. But we have also seen that the PHYSICS that arise at these speeds are AGAINST THE RIDER'S SAFETY. In other words, we don't KNOW how to ensure that in this very high speed range, we can DESIGN the sit-on bike to be safe and controllable if a strong gust of crosswind or other disturbance suddenly arises during a pass on the course.

So my team and I have decided, since this is a sport and not a DEATH WISH, we are going to build and race our bikes for records in the 200-250 mph range in future. That will be challenge ENOUGH!

PART 4

Bill: Larry, I think we have a pretty good outline of your team history so far, what about the present day?

Larry: We are as active as ever, Bill. As we speak, (August 2, 2022) Dean Sabatinelli is on his way to Bonneville Speed Week to race. His entry will be Sabatinelli-Forstall-Knecum and he will be running in MPS F 2000cc class.

The bike is his raked Hayabusa and the engine is a 1720 Hayabusa Steve Knecum built to run on methanol, no turbo, bore is 5mm oversize and stroke is 11mm longer to get the size. The block is water-cooled on this one, a special aftermarket unit to handle the bigger cylinder bores. It's fatter externally to allow for the water jackets.

My health and vision don't allow me to travel anymore, just to the supermarket and pharmacy from my apartment, but I will be like a kid at Christmas waiting to hear from Dean how things go!

(Update) Unfortunately, Bill, word came later that Speed Week '22 was cancelled due to rain and course flooding. In fact, the whole rest of the season was cancelled!

Bill: Sorry to hear that, Larry, what else is your team doing?

Larry: Steve and Mark were planning to do the July Loring meet, but Steve's wife came down with a case of Covid and they had to cancel. I do want to tell you about our drag racing program, though!

Bill: Okay, how long have you been doing that?

Larry: About thirty years, at Atco dragstrip in New Jersey, and Budd's Creek drag strip in Maryland, both of them not too far for us to travel.

Bill: I've heard of Atco for many years, but not Budd's Creek.

Larry: Both of them have been very active for many years. You know, Bill, there are huge numbers of sport bike riders in this part of the East Coast, and on up into New England. Budd's Creek has maybe

six meets a year and Atco has some, and they get literally hundreds of bikes plus many cars out for them. Neither of them hosts NHRA Pro meets, but they don't need to. Between the entries and the hordes of spectators that turn out, they are still good commercial enterprises.

Bill: Tell me about your drag bike.

Larry: We've raced various, and at present I'm working on a Kawasaki 1000cc production racer. Kawasaki has won the World Superbike Championship with these the last five years against the other factories! They have done literally EVERYTHING to them that can be done, and they don't leave anything for the hobbyist or tuner to do! These same bikes are raced in the Senior TT and very successful there. I know, Bill, you looked at the live stream of the TT Races in the Isle of Man in June this year.

Bill: Right, and I had the privilege and pleasure of going to the Isle of Man in person to see them in '64, '73 and '85. Wonderful experiences, all of them.

Larry: Before I get into the drag bike, I do want to mention that maybe 50 years ago, I had a chance to make a couple of passes in a competitive NHRA Funny Car and got my license. The car had a blown fuel 426 iron Hemi with a three-speed automatic transmission, and did about seven seconds and 200 mph. My memory of that event was the huge volume of SOUND the engine made! The blower and injector were so high you had to look around them! The car handled safely and went straight down the track. I'm grateful to have had the experience.

Our current drag bike, which Steve LOVES to ride, is based on a Kawasaki ZX14-R. When I tell you the production ZX14-R weighs 580 lbs, and ours weighs 380 lbs, you will begin to see what we're dealing with here.

Bill: WOW! That is a tremendous difference. Tell me how you achieved it, and how much does Steve weigh?

Larry: Steve is about 160 lbs, which helps. The weight reduction comes through no cooling system at all, no radiator, coolant, pump; carbon fiber wheels, only one front brake, no rear brake, carbon fiber fairing, small fuel tank. Starter and charging system are deleted and it runs off a total-loss lightweight battery. Starting is by an external starter. The frame is stock, but the rear fork is extended 20" over stock, to reduce wheelies on the launch or when changing gears. There is an aftermarket rear suspension unit which is special for drag racing, to hold the 'squat' just the way we want it for best weight transfer and traction.

Bill: What fuel does it use?

Larry: We like to run in a class for gas, and no wheelie bar. This means a lot of thought put into getting a hard launch without wheel spin or wheelie. Our objective is to launch as hard as possible, and we use electronics to accomplish this automatically without much effort by the rider. He has to modulate the clutch a little, is all.

Bill: I am impressed that the engine can run with no cooling system on race gas. I guess this is practical due to the very short 1/4-mile sprint on the drag strip. There just isn't time for the engine castings to heat up to the danger point, they are aluminum anyway. The ZX14 has a fairly large crankcase, and the cylinder block is one piece with the top half of the crankcase. That's a lot of metal to heat.

Can you describe for us how Steve makes a pass.

Larry: He stages, a crewman starts the engine, Steve pulls in the clutch and selects first gear. He opens the throttle, but the electronics limit the revs to 6000. On the green he releases the clutch, and the electronics apply full throttle instantly. The bike launches very hard, but with little or no wheelspin, due to the tire we use. He runs it to 11,000 in first gear, then shifts with the air shifter which cuts the ignition to make a clean and instant gear change, and on through the gears to the top of sixth. At this point he's doing about 171 mph and our best E.T. was 7.45 seconds.

Bill: The tire must be special, tell us about it.

Larry: It's an American-made Dunlop drag tire rated as 200/50/17. It is about 7-1/2" wide as mounted on the very wide carbon fiber wheel. It has a very large footprint and is made of grippy rubber so is ideal for our purposes.

Bill: The tire slipping on the rim is an old, old story for race bikes, Larry. How do the carbon fiber wheels handle this?

Larry: Clamps or screws are not necessary, Bill. The surface of the rim has a coarse texture where the tubeless tire seats, and the tire surface grips on this texture securely.

Bill: Larry, thanks for this insight into the sophisticated technology that makes a drag bike like this one go so fast nowadays. In the '60s the top professional drag bikes needed nitro straight from the can to give this performance, and now gasoline can do it.

Many thanks for taking the time to tell us all these interesting stories about a lifetime of land speed racing, with a little drag racing added. I know the readers will love it.

Larry: Bill, my thanks to you and Wendy at the Bonneville Racing News for your interest! I've been reading BRN for many, many years.

End

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