

TWO THOMPSONS,

Danny Thompson Chases a 46-Year-Old Top Speed Dream



[Challenger II was in pristine condition—having been disassembled and kept from the elements for the last 46 years—when Danny Thompson decided to take his dad's car back to Bonneville. This shot was taken one week before a complete teardown to detail, paint, and then reassemble the entire car. Thompson's dilemma at this point was that he has enough funds to finish the car, but not enough to test or run it. Though the majority of the original chassis and aluminum work is being retained, some modifications are being made for the sake of improvements or packaging.]

ONE GOAL: 500 MPH

✍ Thom Taylor 📷 Thom Taylor and HOT ROD archives



THE BIRTHPLACE

The Challenger II was originally built in a shop at 1655 Cota Ave., Long Beach, California—Google Map it.

» Last month, HOT ROD did “Take 5 With Danny Thompson,” giving you a rundown of the “wheres” and “whys” of this historic reimagination of his father Mickey’s Challenger II land-speed record car. There weren’t enough pages for the “what” and “how” portions of the effort, so we are giving you a rare back-to-back look at Danny Thompson’s Challenger 2.5.

The Challenger II streamliner was the brainchild of the hyper-prolific and ingenious Mickey Thompson. First constructed in 1968, it was noteworthy for its unprecedented who’s-who of talent. With drag-racing fabricator and driver Pat Foster overseeing the build, Thompson hired Quin Epperly (famous IndyCar builder and fabricator) for chassis construction, Tom Jobe (from “Surfers” Top Fuel fame), and Nye Frank (the proverbial Zelig of automobile racing endeavors) handling the many aluminum panels necessary to sheath the race car, with assistance from Lil’ John Buttera. Ford supplied money and engineering talent, with some fab help from Kar Kraft in Detroit. Though Thompson would pilot the machine, his backup driver was the talented Danny Ongais, just to complete the assemblage of the all-star aspect of this race-car development.

We should also add that this car was being constructed while Thompson was in the middle of building his Bonneville Mustang and three Mustang Funny Cars, one of which was the experimental “monocoque” car. Like we said, Thompson was nothing if not prolific.

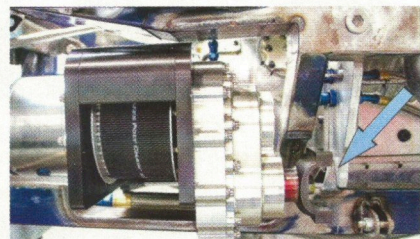
The newly dubbed “Mickey Thompson Autolite Special” did well on initial Bonneville tests, but time, weather, and other pursuits mothballed the project until 1988. Pulling the wraps off of the then-20-year-old race car, Mickey put together the first part of the funding to upgrade the Challenger II with son Danny planned to be at the wheel. Three weeks later, Mickey and his second wife Trudy were gunned down in their driveway.

Put back under wraps for another 20 years, Danny is now upgrading the car with still more tricks and improvements to chase the dream of both he and his father to have the fastest time for a piston-driven land vehicle. Ever.

Gone are the two Ford SOHC engines originally powering the all-wheel-drive Streamliner, supplanted by two Brad Anderson 500ci A/Fuel-type engines. Richard Catton of RC Performance built the bottom ends with Bill Miller rods and pistons and Velasco cranks. Jerry Darien was responsible for the top end and figuring out the combo. The two engines are synced by an external driveshaft-like arrangement attached by

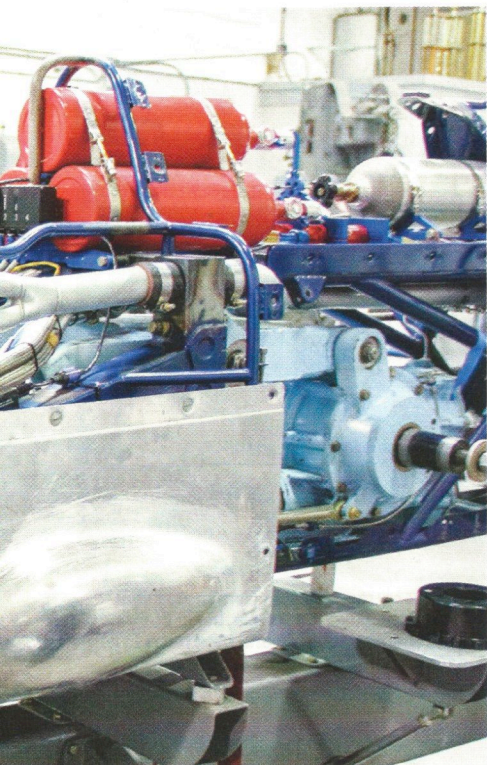


[Fabricated knuckles and massive U-joints replace the stagecoach-steering. The original '68 Camaro box from Lee MFG was retained.]



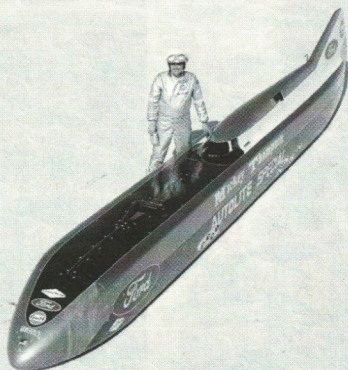
[A Gilmer belt drive on the front engine spins a driveshaft (arrow) that runs along the outside of the frame to a similar setup tied to the rear engine. The twin Ford SOHC motors were only connected by the salt.]

46-YEAR OLD QUEST FOR 500 MPH

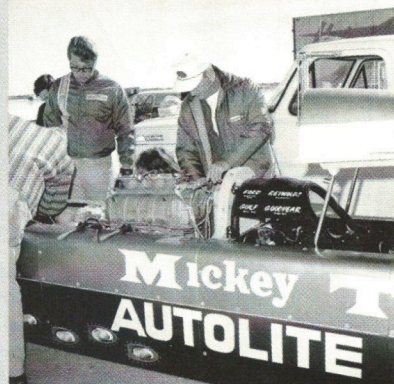


[Above: A minimal amount of changes to the Challenger II's aluminum panels were necessary, but when they were, Terry Hegman was tasked with making the mods like this aero bubble. The original zoomie headers were changed in favor of these. With an estimated 200 pounds of thrust, Thompson wanted to utilize that force in his favor. This is the rear engine sitting behind the driver, who would be positioned to the left of this image. The frame is wider at this point relative to the engine than the front engine as the frame tapers as it goes forward.

[Left: This is the front-positioned Brad Anderson A/Fuel-type Hemi. A low intake manifold was fabricated to position the Accufab throttle bodies forward of the engine to conform to the existing frame and bodywork, which tapers in as it goes forward. Thompson feels one of the advantages he has over the competition is the small frontal area.



[These Eric Rickman shots are more than 46 years old, yet are a testament to the timelessness of the Challenger's design.



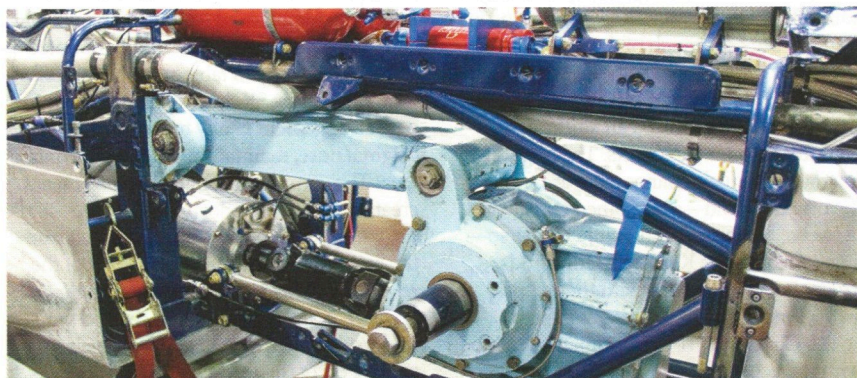
[The poet Ralph Waldo Emerson once said, "In skating over thin ice, our safety is in our speed." That may have been Thompson's motto, for he seemed to be seeking ever faster speeds, with the confidence that no matter how fast he went his safety was assured by his velocity.



[Besides the electronics upgrades, Anderson engines, and front-end changes, the Challenger 2.5 was extended at the rear with the bottom angled for better air management behind the body. In these shots, you can see how the tail was originally configured. Also, without the ability to get current shots of the overall Streamliner in the Thompson shop, these black and whites give a better indication of the size and proportions of the Challenger.



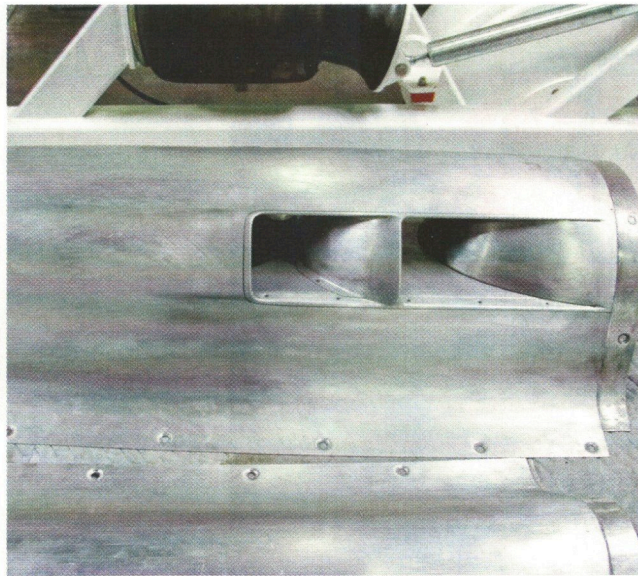
[And finally, the expression of Mickey Thompson in the cockpit of the Challenger II project the confidence and satisfaction Thompson had for his latest fast foray. Danny says his father was constantly thinking up new ideas and challenges to conquer. He never slept more than two or three hours a night because his mind wouldn't let him.



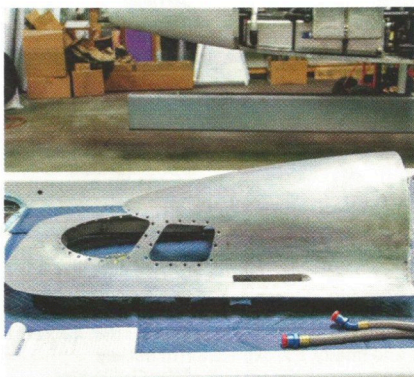
[The oversized quick-change centersections are cast magnesium, a joint effort in 1968 between Mickey and the late Ernie Immerser. Six were cast, two of which are used on Challenger II. The massive trailing arm is one-off Kar Kraft's original components from 1968. Kar Kraft was contracted as Ford's racing arm to assist in developing certain portions of the Challenger II project. You may know Kar Kraft for helping to develop Ford's Trans-Am Mustangs, the Boss 429 builds, and much more in that period.



[This is the new tail section with the two parachute canisters. Since FIA records require a quick backup run for setting records, canisters containing pre-loaded 'chutes will be on hand to lessen return prep time. In addition, air jacks are on board, which will be activated for a Lazy Susan-type platform that, when positioned under the car, can rotate the streamliner within minutes for return runs. How cool is that?]



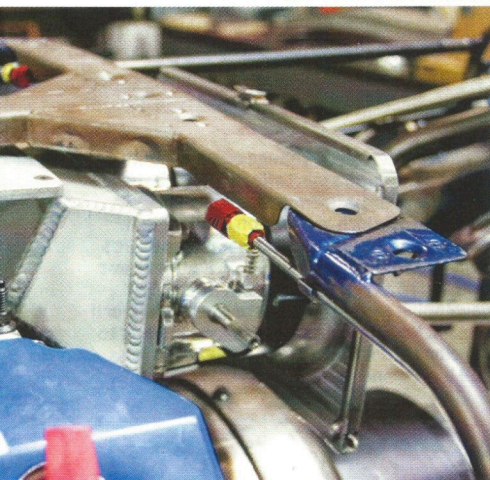
[These inlets were deemed a necessary modification from the original NACA ducts. Terry Hegman in Fountain Valley, California, beautifully executed them. Notice how the aluminum pulls out and then fades in as they transition back to the original Jobe and Frank-built panel.]



[The sinister-looking canopy awaiting new glass and fitting to the frame. This is the 46-year-old combined efforts of Tom Jobe and the late Nye Frank.]



[Another new packaging consideration that needed to be incorporated into the original car is the fire system positioned behind the drivers cockpit.]



[A close-up shot of the fabbed intake for the forward-facing Accufab throttle bodies.]

Gilmer belts to the snout of each crank. The give of the belts will help to take up any deviation in engine speed, syncing the two in harmony. Initial tests will be with a blend of 50 percent nitro. That mix could change if additional power is needed, but Thompson wants to see how much of the power can be effectively put to the salt first.

The B&J three-speed transmissions are attached to synchronized air shifters for precise, instantaneous shifts. The huge magnesium quick-change axles are from the original build—a combined endeavor between Thompson and Ernie Immerso—as are the massive Kar Kraft radius rods. The only change will be with the steering arrangement.

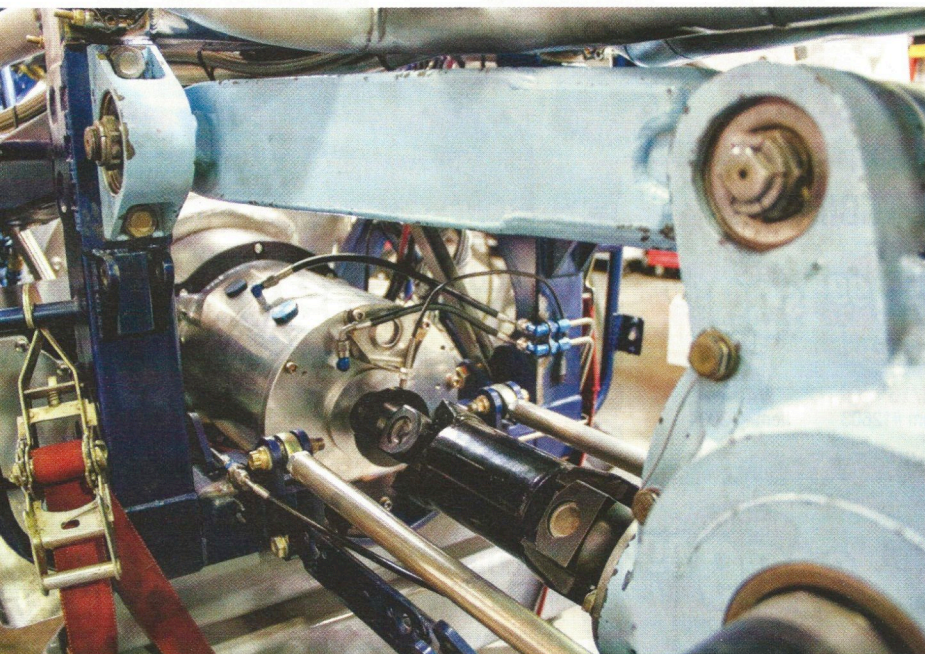
The Challenger II was originally designed with stagecoach steering actuated by a '68

Camaro steering box. The unusual solution was due to the limited amount of space available to keep the nose as small as possible. Danny Thompson has completely redesigned the front end to eliminate this unusual and outlawed feature, going with compact and complicated solidly mounted spindles—a study in fab porn. Positive offset wheels made by SK Specialties help keep this new arrangement neatly tucked inside the original nose, maintaining the small frontal area. The compact arrangement also meant creating stout, new shorty drive axles.

Out back the tail has been extended from the original design, and the body aft of the rear end was also lengthened and angled upward. A splitter will be attached to the underside to help stabilize the dirty air spilling off of the rear. Danny says the tail



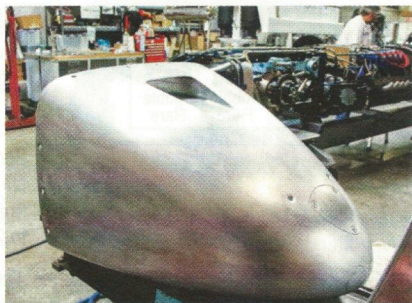
[Stored around the shop are stacks of aluminum skins for the Challenger 2.5. This is just one area of several storing the 46-year-old panels.



[Looking past the massive Kar Kraft trailing arms, you can see the forged-aluminum housing of the B&J (BandJtransmission.com) Big Boy three-speed transmission, the air-shifting lines that control it, and short driveshaft that connects it to the quick-change centersection. Originally the Challenger II was built with a pair of 500hp Ford SOHC engines backed by Chrysler TorqueFlite 727 three-speed automatics. The new Brad Anderson Hemis promise to quadruple the power the SOHCs made, and could prove to test the strength of the Ernie Immerso quick-change front and rear axles. Sharp-eyed readers will note the evolution in fasteners used on the Challenger II—the original build featured six-point headed bolts and lots of safety wire. The new components have been installed with a mixture of Allen-head and 12-point fasteners. Lock nuts have replaced the safety wire.



[Cooling lines are new and snake throoughtout the frame. Again, changes required modifications that can be seen in bare metal. The chassis will be disassembled and painted and detailed before being reassembled.



[The nose was modified to accept an air inlet that is ducted back to the front-engine throttle bodies with a series of segmented aluminum ducts. This new ducting had to fit within the confines of the original aluminum skin.

extension was more for cleaning up the air than stability, though that may be an added bonus—it's hard to say at this stage. Tim Gibson was instrumental in determining the aero mods like the tail and air inlets, which were beautifully created within the original aluminum skins by Terry Hegman in Fountain Valley, California.

At 5,200 pounds, the Challenger 2.5 is plenty heavy, and Thompson is adamant that no additional ballast will be added. Many Bonneville race cars ply the salt loaded with weight to help keep them planted. Thompson has a problem with the idea of pushing and then stopping the extra mass. If there is need for additional down-force, he has aero pieces that can be added to the front and a tray for the rear. He feels that one of his advantages over the competition is the car's four-wheel-drive system. "But that also means that we'll need to make hay in the bottom end," Thompson says. He also likes that the small frontal area will help his chances.

When the beginning car builder looks at a build such as this, the intimidation is 11 on a scale of 10. But all hot rodders can benefit from eyeballing this massive undertaking. One of the main takeaway points is that each system or function has to be designed one step at a time while keeping in mind how it will integrate into the car's overall construction. In a build like this, packaging each system for minimum space and maximum function is important.

Taken in total, it is an unimaginable undertaking, but that's not how to approach a build. Focus on each system separately—one at a time—and as you complete it, go on to the next system. Before you know it, you'll have a partially completed car and be on your way to finishing what you have wrought.

Tom Jobe recently stopped by Thompson's shop and commented on the differences between how they built race cars in '68 and how builders tackle projects like this today, lamenting that back in the day they used existing components and built a car around those pieces. Today, with the abundance of talented shops and equipment—not to mention huge budgets—they make all of the components to meet their own criteria.

Still, when you look at the car as it sits now—panels off and its complexity exposed—you're struck by how contemporary it seems. The experienced minds and fabricators are evident in every square inch of Thompson's Challenger 2.5. Today Danny's challenge is to seamlessly blend the talents and dreams of a legendary father and his collaborators with his own determination to see those dreams realized almost 50 years later. **HOTROD**