



# LONG UNDERWEAR, HARLEY DAVIDSON AND A

***"It was easier to win  
Daytona twice than  
to get this record."***

**— Calvin Rayborn**

**by Bruce Flanders**

Harley's assault on the record started October 5th and ended on the 16th with many strange, and two very happy stories that can be related here.

Dick O'Brien, Harley's racing manager, put together a very impressive package to attack the then current record held by Don Vesco's Yamaha. The streamliner, which is the most necessary ingredient, was built by Dennis Manning and Craig Rivera. Manning who is the owner and designer of the liner was the pilot of the vehicle during speed week when it suffered minor teething problems on the low speed runs.

As it turns out, the major problems in handling were yet to be found, and O'Brien hired the proper chauffeur to find them, *Calvin 'Lee Pussycat Parachute' Rayborn*. That complete series of nick names were added to his given handle after each fantastic maneuver from which he escaped unharmed, and outwardly unperturbed.

One example of this would be the time that Cal was cutting a hard trail down the salt around 230 mph and the liner started to do some trick wobbles. So violent were the handling problems that Cal went around one of the lights instead of between them. He quickly pulled the chute, and when the chute

popped at that speed, the liner wiggled on the end of the chute cord like a Barracuda with a hook in its mouth.

After getting out from under the shoulder and lap belts that restrain him, Rayborn was heard to say "It's scary." Cal went on to relate everything that happened with all the calm and cool befitting a real professional. He also remarked "We better do something about the chute, they're supposed to work better."

Jim Deist (of drag chute fame) was then called over to examine the chute picture and recommend any changes. He added about 10 feet to the lines of the 6 foot diameter ribbon type chute and also repositioned the mounting tie so it was just above the center of gravity on the liner. Diest also cut a small X in the center of the chute which reduced the efficiency somewhat but made the stopping a much safer experience.

Prior to the above incident the liner had gone on its side at least twice and clear over on its back once during the low speed runs. This gives you an idea how Rayborn received the name PUS-SYCAT (nine lives and uncanny balance).

The liner itself started the month of October with a beautiful Molly paint job and it ended the assault with the title "The Streamlined Wheaties Flake." The many hundreds of yards the bike spent on its side show in some of the pictures you see on the accompanying pages. It got to the point where Clyde Denzer, from the H.D. Racing Department was attempting to get the Arno Ductape people to sponsor the motorcycle, for it



***Cool, calm, and deliberate.  
Rayborn buckles on his helmet  
before taking off on another 200+  
mph run.***

seemed that their product was the only thing left holding the skin on.

Are you wondering why all these smart racing people had such a rough time going straight at Bonneville? After being there and watching them work all night, night after night in an attempt to make the liner handle properly, we will try and relate some of the problems they encountered.

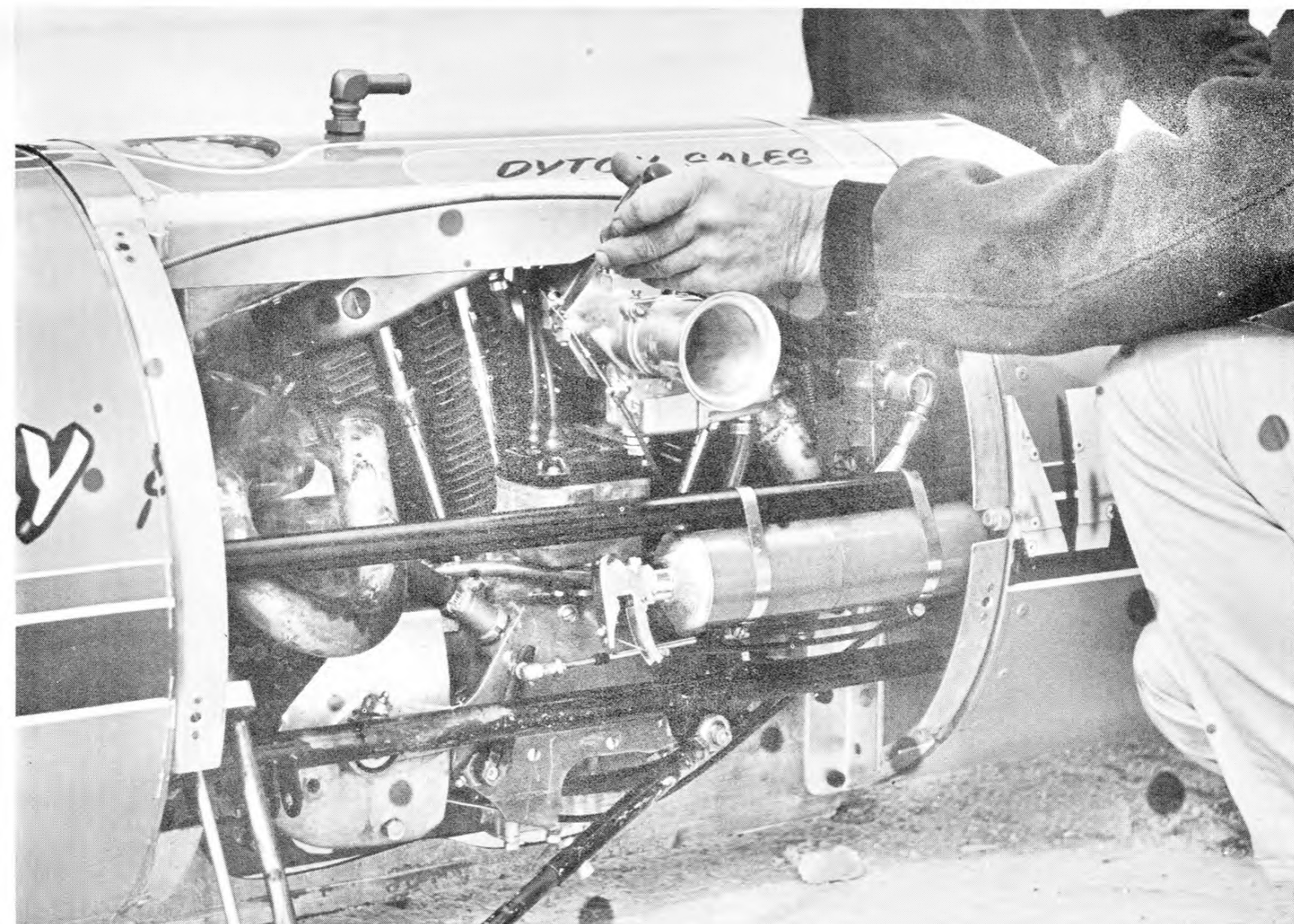
First problem is with the AMA. They require that the referee set a particular

# LOT OF LUCK



*Mert Lawill came up to give Cal moral support, and whatever other type of help he needed.*

*It's a tight fit under the cowl with all that machinery to enclose. Check that rear exhaust pipe.*





***With everyone standing around in heavy jackets, the salt actually looks like snow. Hard to believe just a couple of months ago, it was over 100°.***

speed limit for the first run and then increase it as he sees fit with regards to handling. This shouldn't be too hard on the vehicle or the driver, but it is hell on a racing engine. The boys from H.D. foresaw this problem and built a 55" semi stocker to make these first easy passes.

The problem with the 55 incher was that the powerplant was green, and it seized soon after they started to work it very hard. Chalk up engine number one.

Now they break out the heavier guns and the first of these was Warner Riley's 90 inch gasser. Hopes ran high and the weather turned bad. Wind cooled any efforts for the afternoon and they took the bike back to town to check it over once more, nose to tail.

The handling problems were basically attributed to two things. First, not enough castor in the center kingpin steering. Second, the rear section of the vehicle was flexing badly, creating a strange wobbling sensation.

The vehicle itself is a monocoque construction with the driver's compartment being all aluminum and the front and rear frame sections bolt-up to this structure. This design is basically

good, but Manning didn't understand the fantastic twisting action that would result on the rear wheel when fully loaded.

No less than twice, the rear section was reworked, triangulated and gusseted to overcome this problem.

At the same time tires became a problem, as so often happens on a vehicle of this type. The first tires for the vehicle were from Goodyear, and they were originally designed for a car. This car type Bonneville rubber has a flat bottom configuration approximately two inches wide with semi sharp edges. As it turns out, this type of construction will not work properly on a motorcycle at high speed. The vehicle has a tendency to "search" for a single running edge and this creates an unstable condition which results in some unnerving moments at anything over 180 mph.

This problem was solved by the use of some Firestone tires of the same size (5:50 x 15) with a curved surface. The slightly rounded footprint attained with these tires (90 to 100 PSI) helped the handling immeasurably and Cal said of the last few runs "All it wants to do is go straight."

The wheels that Manning uses on his creation are beautifully simple but not by any means cheap. Actually two short halves of a Nissan group seven car wheel bolted together giving the narrow



***The waiting is usually the worst part. Rayborn waits while the crew makes some last adjustments.***

configuration is what is needed in the close quartered wheel compartment.

With that brief outline on the handling problems we now get down to the meaty part of a 265.492 mph record.

The engine man that O'Brien contacted for this job had to have large amounts of Bonneville experience. Warner Riley was the one elected and



**Getting all strapped in, Rayborn looks a bit pensive. After a week's work, the chassis didn't wiggle anymore, which undoubtedly made Cal feel a lot better.**

**All buttoned up and ready to go. Side visibility was good, although looking through the nose produced a distorted image.**

this judgement was based upon the half dozen or so records that he already held at Bonneville.

Warner brought with him two twins, one a 90 inch gasser and the other a 83 inch fueller.

The 83 inch set the record on Oct. 15th at 255.380 and then it did a Mission Impossible "self destruct"

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number just past the lights. A hole in the top of the piston cut down the compression and that was all she wrote for that motor.

While the H.D. boys were getting ready to celebrate their much deserved victory on the salt, O'Brien was already drawing the conclusion that the record was far from safe. At dinner that night he told the boys that they would be going back to work that night. Object, swap back to the 90 inch and put fuel in it to bump the record higher the next day.

For the ninth time in ten days we saw the dawn break on the salt. The healthy sounding 90 was warming under the careful observation of George Smith (of S&S carburetors fame). George was considered the fuel expert. He, along with John Pohland of H.D., handled all the trick fuel mixing. The mixture in the 90 inch was reported to be somewhere around 80% nitro, although confirmation of this figure would not be released.

Rayborn jumped in the Wheaties Flake and proceeded to go through the eyes at 266.785 just like an arrow. While the team was doing its standard work at the other end during the turn around, it was discovered that there was a one inch long crack in the dome of the rear piston. Much discussion followed this observation, and it was decided to soften the load of nitro and go back with crossed fingers.

John Yates (voted hardest working crew member) packed the chute one last time. The nitro load was softened to around 30% and Calvin was ready to make his last trip on the salt.

While in the eyes the engine let go and Calvin quickly pulled in the clutch, and coasted the last 300 feet or so for a one way 264.200 and an average 265.492, a new record.

We at Cycle Guide would like to extend our congratulations to Calvin and the H.D. crew for a job well done. **CG**

