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Inside this issue:

Runoffs Preparation <i>continued</i>	2
<i>Race Track Bonus</i> Mason Back at Auto Club Speedway	2
Appearances	3
Tech Tidbits— <i>Team LMR</i> Formula Mazda—Dyno Testing	4
Web Special	4

Runoffs Preparation Intensifies!

September 12 - 14, 2014 was the last race weekend for *Team LMR* to prep for the SCCA National Championship Runoffs at Mazda Raceway Laguna Seca coming in October. Since the last time the team visited the beautiful Monterey Peninsula in March, a new stainless steel exhaust elbow was fabricated so that Larry's Formula Mazda would meet the strict sound control limits. In a one-lap sound control check, the modification proved successful.

The double race weekend format featured a race

group total of 56 cars registered with others on a waiting list to get in! There were 18 cars in the FM class and due to the large numbers, would be getting a "split start" for the race. Unfortunately, in Friday practice, Mason exited the famed "Corkscrew" corner on about the 4th lap and the engine quit. Fortunately he was able to coast it into the pits. When he tried to re-start the engine, the muffler belched out a huge flame that enveloped the rear wing. Mason was able to shut off the ignition and fuel pump before exiting the car and the fire



Larry's view from the cockpit while making a pass heading into the famed "Corkscrew" at Mazda Raceway Laguna Seca.

proved to have done only superficial damage. That was the good news! The bad news is that the team worked hard to get the car started for hours until finally with a new ignition box and two new coils the

Continued on page 2

Sonias View from the Passenger's Seat

Hey everyone - the SCCA National Championship Runoffs at Mazda Raceway Laguna Seca are almost here! We have been very busy preparing for this event, as it is no small production to pack everything up for the drive to the beautiful Monterey Peninsula. Well, actually, Larry's driving - I'm taking a flight there...

Before we head out, we wanted to thank you for your support and encouragement this year as you have been instrumental

on the team's journey to the Runoffs. We could not have done this without our amazing sponsors, friends, and fans!

So, by popular request, here is a condensed event guide: You can watch his race via live streaming on www.SpeedCastTV.com. Larry's race (as of this printing), will have the green flag dropped at 1:30 pm PDT on October 11. You can also follow live timing and scoring at: live.sfrscca.org as well as

on the Race Monitor app (Race-Monitor.com) available for iPhone and Android.

We invite you to like *Team LMR's* Facebook page at: Facebook.com/TeamLMRUSA, where we'll be posting updates on qualifying results (October 7-9), and more throughout the week. I'll also be taking my MRN newsletter column on the road so I will be posting there as well. BTW, it's not too late to sponsor Larry at this race!

Runoffs Preparation *continued*

car started again – with just enough time left in qualifying to do one warm-up lap. Mason qualified last in class and overall.

In what proved to be perhaps one of Mason's finest drives of his career, he charged from last (overall and in class) to fifth in class (28th overall) with fourth and third just in front of him at the checkered flag! "I feel like if I would've had another lap or two we could have had a podi-

um," beamed Mason after the event. He normally would've had the extra time but due to lingering fog in the morning, the race was cut a few minutes short. He still earned the second fastest lap of the race

Qualifying took place on Saturday afternoon for Sunday's race and Mason decided to try to save his tires for the race and only do three laps. He felt like he put in a good lap on the third and came into the

pits. In retrospect, he should have

stayed out for the session and tried to learn more nuances of the track. He ended up qualifying eighth in class. This time it was much harder to work his way up through the field and he faced some fierce battles. With the other faster class cars interrupting his momentum,



Paul Endres from Goodyear takes tire temps on Mason's Formula Mazda in the pits at MRLS. Photo by Stella Castro

he had to settle for another fifth place finish.

The team had three goals for the weekend – 1) make sure the car would meet sound control, 2) go faster than the last time they were here, and 3) load the

Continued on page 3

Race Track Bonus

Mason Back at Auto Club Speedway

After returning from the dyno test and replacing the faulty ignition coil (see page 4); **Team LMR** headed back out to Auto Club Speedway in Fontana, CA to test gear ratios with the newly found horsepower. The last time Larry raced here, he was not able to maximize his top-speed on the high-speed oval portions of Turns One and Two. This time things were different. With the proper gearing in place, Mason was able to gain over 5 mph. While they were there, they also

worked on other set-up changes to help the car negotiate the notoriously bumpy infield section that leads onto the main straight. There are many challenging portions of this race track that can gain you or lose you fractions of a second of time. Keep in mind that if you can gain 0.1 seconds per corner, by the end of the lap of 10 corners, you've gained a full second! Of course, finding the right compromise with wing angles that give you more grip in the corners yet

slow you down on the straights is also part of the equation. That's where the data acquisition system comes in handy. You can view segment times and understand which changes help to make a better lap time. Even if two laps are identical with radically different set-ups, you can still strategize on which set-up might be better for qualifying and which set-up would be better for the race. Factors such as tire degradation, passing ability on the high-speed

sections and under braking all come into play.

Of course all of this testing during a track day had Mason sharing the track with a bunch of Corvettes, Camaros, Mustangs and other fast street cars modified for track day use.



Team LMR FM on the dyno for testing. Photo by Larry Mason

Runoffs Preparation *continued*

car on the trailer in great shape for the Runoffs. All three goals were met so it was a successful weekend.

Up next are the SCCA Runoffs scheduled for October 4-12, 2014.

Racing at this level would be impossible without the support provided by all the *Team LMR* sponsors, especially Crew Chief Tom Engelsman of Auto Diagnostic Services (TheFordGuru.com), The

Fiberglass Body in Hawthorne, CA for helping keep the *Team LMR* Formula Mazda bodywork in great shape, and Polar Heart Rate monitors who provide Mason with the ability to record heart rate

data that he can later analyze. In both races, Mason's heart rate peaked at over 160 bpm and that knowledge helps him prepare physically for his upcoming races.

Appearances

On July 16th, Larry Mason brought his *Team LMR* Formula Mazda to put on display for the Northrop Grumman CARS Club Car Show. This annual lunch time show in front of the cafeteria is always popular with the employees. Mason answered many questions about his car and fielded some Polar Heart Rate Monitor questions as well (he had a

display for Polar with his race car).

With racing highlight video action on his laptop, Mason provided some commentary when people took a closer look.

As usual, it was another fine show with thousands



walking through to check out all of the cool classic cars.



The display set up and with crowds. Photos by Larry Mason

Win a Firestone Racing Hat!

There were no winners in the last contest so *Team LMR* will be giving away two Firestone Racing hats in a random drawing based on correct answers to the puzzle on this page. One hat will go to those who read this newsletter online and one will go to those who get the printed version of *Mason Racing News*. All

correct entries must be received by 10/17/14. Good Luck!

Hint: All answers are in this newsletter.

To answer correctly, list answers by question number and send via email or in printed format delivered by USPS before the deadline.

- 1) What is the *Team LMR* sponsor website address listed on the front page?
- 2) How many top-five results did *Team LMR* score in September?
- 3) What testing device is featured in Tech Tidbits this issue?
- 4) What is the name of the Team LMR Facebook page?
- 5) Where can you watch live streaming video of Larry's race at the Runoffs?



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"Unless you're leading, the scenery never changes." Larry Mason

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Please contact Larry Mason today!

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We look forward to hearing from you soon!

Tech Tidbits—An Inside Look at the **Team LMR** Formula Mazda - Dyno Testing

In the last issue of MRN, we talked about the Formula Mazda engine. In this report we'll talk about how to test that engine to determine maximum horsepower and torque. There are a couple of ways to do this with a dynamometer—either attached to the engine or via the chassis. For ease of use, a chassis dyno is the way to go as the engine doesn't have to be removed from the chassis. We recently performed this test to find out if Larry's thoughts

that he was down on power were accurate or just in his head. Here's a summary of that test.

The first step is to tie the race car down whereby the rear tires are on top of the roller and the car is unable to lurch forward or back. Multiple heavy duty ratchet tie-down straps are used for this.

Next the car is warmed up to normal operating temperatures for both the engine and gearbox. Once everything is warmed up, the test can begin. From

Larry's standpoint he just sits in the car as if he were driving and applies full throttle in fourth gear starting at around 3,500 rpm. The roller is providing a distinctive load on the car to simulate real world driving. When the revs increase to the point of bouncing off of the rev limiter, Larry shifts into neutral and shuts off the ignition. The test is complete at that point. The computer will give the results of max power and torque. Multiple tests can be run testing different

things such as ignition timing, carburetor jets, and other items. For a quick video view of this go to:
www.youtube.com/TeamLMRUSA or scan the QR code with your electronic device below.

