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Thread: Car weight and distribution

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Blue MK3 Senior Member Join Date: Oct 2012 Location: Raleigh, NC Posts: 202 Post Thanks / Like

Car weight and distribution

Couple of questions related to car weight/distribution. First question is what does your car weigh? I had my MK3 in a performance alignment shop a week ago and as part of the service, they weighed the car. Mine came out to be 2280 lbs. with 47.5% on the front wheels.

Wayne Presley Administrator Gold Supporting Vendor Join Date: Feb 2011 Location: Enterprise Alabama Posts: 2,749 Post Thanks / Like Blog Entries: 3

Originally Posted by Blue MK3 Couple of questions related to car weight/distribution. First question is what does your car weigh? I had my MK3 in a performance alignment shop a week ago and as part of the service, they weighed the car. Mine came out to be 2280 lbs. with 47.5% on the front wheels.

The FFR's are rear weight biased and work really well. 50/50 is fine for a low HP car but everything really fast is tail heavy.

Wayne Presley www.verycoolparts.com Xterminator 705 RWHP supercharged 4.6 DOHC with twin turbos

#3

Bob Cowan Supporting Member Join Date: Feb 2011 Location: Colorado Springs Posts: 790 Post Thanks / Like

My car weighs 2450#, 49% front, 51% rear. 1/2 a tank of fuel, a my weight in the driver's seat.

.boB "Iron Man" NASA Rocky Mountain, TTU #42 FFR MII: Dart 427W, Momar 8 stack EFI, Tremec TKO, IRS 3.55 TruTrak, Red with Ghost Flames, 600'ish HP. -- Gone, but never forgotten www.RacingTheExocet.com

#4

Ray Super Moderator Join Date: Feb 2011 Location: La Mesa, California Posts: 1,038 Post Thanks / Like

Here is what ours weighs (used the CHP's scales) Weight 2460 lbs. (302 with iron heads, live axle, full tank, steel wheels and me in the car) Weight Distribution (%) F/R 46.9-53.1 Ray

I'm not getting gray, I'm adding chrome... Under-steer is when you hit the wall with the front of the car and over-steer is when you hit the wall with the rear of the car. Horsepower is how fast you hit the wall and torque is how far you take the wall with you. -- Jacques Schnauzee "World Famous Racecar Driver"

"If you can make black marks on a straight from the time you turn out of a corner until the braking point of the next turn, then you have enough horsepower."--Mark Donohue

#5

Someday I Suppose MKIII #5835 Join Date: Feb 2011 Location: Stanhope, NJ Posts: 783 Post Thanks / Like

As other noted you probably don't want true 50/50 weight, but to answer the other part of the question, adjusting the springs has a major effect on effective weight at the corners. While your not physically moving the weight around you are transferring weight by changing the heights. Think about a wheelbarrow, when you lift the handles, you didn't move weight, but you are putting more of the weight onto the front tire.

HTH's Scott

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MKIII #3835 IRS, Anderson Performance 408 Levy T-5 Trans, Team III Wheels Paint completed November 2010, passed NJ State Safety Inspection June 21st, Tagged and First Drive 7/1/2011

#6

Blue MK3 Senior Member Join Date: Oct 2012 Location: Raleigh, NC Posts: 202 Post Thanks / Like

Scott, let me think about the wheelbarrow analogy. Thanks for the post.

#7

Ray Super Moderator Join Date: Feb 2011 Location: La Mesa, California Posts: 1,038 Post Thanks / Like

How about this. Lets say that you weigh 220lbs. Get down on your hands and knees with your weight evenly distributed between the hands/knees. That's 55lbs for each point of contact with the ground. If you lift one hand off the ground, you don't weigh any less, but have transferred that 55lbs to one of the other points of contact. Which one and how much depends on how you adjust for the missing point of support.

I'm not getting gray, I'm adding chrome... Under-steer is when you hit the wall with the front of the car and over-steer is when you hit the wall with the rear of the car. Horsepower is how fast you hit the wall and torque is how far you take the wall with you. -- Jacques Schnauzee "World Famous Racecar Driver"

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#8

Blue MK3 Senior Member Join Date: Oct 2012 Location: Raleigh, NC Posts: 202 Post Thanks / Like

Ray, why wouldn't the hand now remaining on the ground weigh 110lbs, assuming that I didn't shift my body forward or back?

#9

Blue MK3 Senior Member Join Date: Oct 2012 Location: Raleigh, NC Posts: 202 Post Thanks / Like

I think I just figured it out. If I have 110lbs on my hands and bend my elbows a little, there's now more weight on my hands and less on my knees. But in the video clip I mentioned, the weight distribution adjustment was done AFTER the ride height was set. Seems like the ride height would have been changed from the 4 1/2" setting they dialed in. Thanks, guys.

#10

CraigS Senior Member Join Date: Feb 2011 Location: Manassas, Va. Posts: 2,483 Post Thanks / Like

Within any normal amount of available change ride height has no effect on front to rear weight distribution. What they may have been doing was balancing the left to right distribution to make sure the braking was good w/o locking up one of the wheels prematurely. Do some google searches on corner balancing for more detail.

FFR MkII, 408W, Tremec TKO 500, 2015 IRS, DA QA1s, Forte front bar, APE hardtop.

#11

Mark Dougherty Senior Member Join Date: Feb 2011 Location: Hershey PA Posts: 675 Post Thanks / Like

Blue I think you were thinking Jim was adjusting the front to rear on the scales. He was not It was the diagonal corners he was after. Jim was going for 50/50 left front to right rear, vs. right front to left rear. Not front to rear. It is fairly simple on a car with coil over shocks to adjust the diagonal corner weights. As stated earlier in this thread front to rear and left to right weight is built into the car. where the batt is, the engine, and the meat sack in the drivers seat.

Last edited by Mark Dougherty; 11-22-2012 at 02:56 PM. The traveling Builder 717-773-5624

#12

Blue MK3 Senior Member Join Date: Oct 2012 Location: Raleigh, NC Posts: 202 Post Thanks / Like

Well, I'm not sure I understand the details of how it works, but I'll take your word.

#13

Tad Junior Member Join Date: Feb 2011 Posts: 27 Post Thanks / Like

Originally Posted by Blue MK3 Well, I'm not sure I understand the details of how it works, but I'll take your word.

Think of a 4 legged table where 1 leg is too short - every restaurant has one of those. The majority of the weight is shared diagonally across the table on 2 legs as it teeters back and forth. The idea is to get all 4 legs (wheels / coilovers) to balance the load - but you've got to do it on the diagonals. Not much you can do side to side or front to rear without "moving" heavy stuff around. But you can balance the diagonals to stabilize the table.

#14

Blue MK3 Senior Member Join Date: Oct 2012 Location: Raleigh, NC Posts: 202 Post Thanks / Like

Thanks Tad, now I get it. I guess I was thinking the F/R weight distribution was being reset. Best, Blue.

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