

**SWAP FORMULA II - This is a proposal.
Read this first.**

The ChumpCar World Series was created and based on the premise that successful club racing needs to maintain three (3) core factors:

- Point #1 - It (ChumpCar) has to be affordable
- Point #2 - It (ChumpCar) has to be enjoyable
- Point #3 - Amateur racing (ChumpCar) should not be taken -- or take itself -- too seriously, at least to the point that it affects points 1 or 2

While Point #2 and #3 can - at times -- be entirely up to the participant (or race official) and is subject to many outside influences, Point #1 is a key factor that the ChumpStaff has always worked hard to achieve and maintain. ChumpCar's progression on keeping racing affordable and keeping the competition tight has gone through various revisions:

- 2009 - 2010: Ten (10) Craigslist advertisements required to show \$500 car
- 2011 - 2013: Average Internet Value (AIV)
- 2014 - 2015: Market/Performance Value (MPV)

Overall, each step of the process has worked pretty well. The competition has been tight, the cost factor of buying, building and racing has been relatively low, and the broad inclusion of vehicles has made the series quite popular, allowing us to become the largest endurance road racing series in the world.

The challenge through all of this has been to manage and moderate the creativity of our members. Creativity is one thing; creating an unfair advantage is another. To that challenge, ChumpCar has always tried to stay one-step ahead of those whose sole passion in motorsports is to find a loophole or weakness in the rules, and to exploit that vulnerability to the point that it invalidates any or all of the core factors that define ChumpCar. Undoubtedly, engine swaps have been the most challenging area of the rules to moderate. Furthermore, it is clear and evident that an engine swap is almost exclusively performed for increased horsepower and performance... it's a way to go faster.

Engine (and other major component) swaps have, in the past and through today, been managed using a value-based formula. Nationally advertised junkyard and used engine prices have been used to apply a points-based increase on cars undergoing engine swaps. However, over the last few years, certain high-output engines have become more plentiful and far less expensive than a car's OEM engine, making engine swaps in certain well-balanced and performance-oriented vehicles very attractive. In some cases, a car can realize BOTH a 30% increase in horsepower and a 30% decrease in replacement engine cost.

While ChumpCar appreciates anything that supports Point #1 and reduces the cost of racing, we also have to be mindful of Point #2. Racing cannot be enjoyable when the balance of competition is altered. In ChumpCar's opinion, the recent horsepower-to-value issue has altered this balance.

Therefore, as a proposed change to the Basic Club and Competition Rules (BCCR) of the Chumpcar World Series, all members are invited to go to the ChumpCar website (www.chumpcar.com) and use, test, review and comment on a potentially new swap formula. After using this test-bed, comments may be submitted to the Board at comments@chumpcar.com. The proposed formula will be further discussed and voted on at the upcoming 1 April 2016 Board of Director's meeting, to be held at Daytona International Speedway.

Now, before the first post on the Forum occurs or the first e-mail crosses my computer, let me clearly state --- **THIS IS NOT AN EXCLUSIVE POWER-TO WEIGHT FORMULA**. Rather, it's an interesting and very precise algorithm with a specific multiplier that requires various inputs... some of which YOU supply and some of which is embedded in the formula.

Yes, the OEM weight of your car is a factor in the algorithm.

Yes, the OEM horsepower of your car is factor in the algorithm.

Yes, the OEM horsepower of the swapped-in engine is a factor in the algorithm.

But, those are not the ONLY factors in the formula. Included in the algorithm is all of the MPV (Market/Performance Value) data, as well.

And speaking of MPV, the same can be said for the algorithm we use to determine a car's MPV.

Yes, we use the used-car market value of your car in the algorithm.

Yes, we use the OEM horsepower of your car in the algorithm.

Yes, we use the OEM weight of the car in the algorithm.

Yes, we use statistical race data in the algorithm.

And, yes, there's also a multiplier in the algorithm.

One immediate point that many Chumps will note is that the OEM weight of your race car is probably far from the stripped-down, race-ready weight of your race car. That difference, alone, throws-off any direct power-to-weight ratio approach.

Additionally, through various engine preparation measures (which are legal in ChumpCar and maintain a perfectly "stock" and "as-originally-designed" engine), as well as the removal of various, non-essential, post-exhaust manifold components, the "as-raced" horsepower rating of your race car may exceed the OEM horsepower rating of your race car... or, if you're using an engine with 230,000 miles on the meter, with 27% leak-down in the #3 cylinder, then your "as-raced" horsepower rating is probably nowhere near the OEM rating. Both of these situations enter in serious inconsistencies in considering the proposed formula as a direct power-to-weight ratio approach.

So... try it out. But, before you begin, you MUST know the year, make and model of your car and you MUST have three additional pieces of information - the OEM curb weight of your car + the OEM horsepower rating of your car's engine + the OEM horsepower rating of the engine that you want to swap into your car. If you don't have all six (6) of these datapoints, you'll get an error message and will not be able to continue.

Okay, so...

- First, enter in the make, model and year of your car.
- Second, enter in your car's OEM weight (because that's the weight rating that Tech will use if your car is protested or if we do a random spot-check on your post-swap "Total Competition Value.")
- Third, enter in your car's OEM horsepower rating.
- Finally, enter in the OEM horsepower rating for the swapped-in engine.

What will appear in the summary box is the number of points which will be added to your car's MPV if you compete with the swapped engine which you identified. If you receive a comment that says "CONTACT REGIONAL TECH CHIEF" then your engine swap will result in your car being classified as "EC" (Exception Class) or, possibly, it may be illegal for entry within ChumpCar.

If you receive the "CONTACT REGIONAL TECH CHIEF" notice and want to discuss why you got that message with ChumpCar officials, please e-mail your Regional Tech Chief. Here's how you do that:

East Region: easttech@chumpcar.com

Central Region: centraltech@chumpcar.com

West Region: westtech@chumpcar.com

If this new formula is adopted by the Board, certain rule changes pertaining to additional components used in completing the swap process may also need to be amended. Likewise, rules and values pertaining to swapped transmissions and/or differentials and final gear ratio changes may also need amendment. And, finally, a few MPV values may also need adjustment.

NOTE - if adopted by the Board, the new swap formula would be implemented on 1 October 2016 - six months from the Board meeting.

All comments to the Board MUST be submitted on or before Sunday, 20 March 2016 for consideration and review. Any comment received after 20 March will be discarded.

I read the proposal, show me the calculator!
