



**STOCK CAR  
SET UP  
MANUAL**

**800-833-5174**  
**[www.harrisautoracing.com](http://www.harrisautoracing.com)**



## Stock Car & Hobby Stock Set-Up Manual

**Technical Information Available at 515-432-6972:**

**8:00am-5:00pm Monday thru Thursday**

**8:00am-4:00pm Friday**

We manufacture our own chassis designs for Stock Cars and Hobby Stock Cars . Besides offering a complete line of service to our chassis, we service all major chassis brands, whether it is chassis repair or parts lines. All product lines we offer, in our opinion, are the best on the market.

Our technical lines are very busy, so we ask that you be patient when calling. We will get your questions answered.

Our goal is to give you the best products and service available, which in turn will translate into winning track performances.

The following are some of the top product lines we offer:

Aero Wheel	AFCO	AFCO Shocks	AFCOIL Springs
Bilstein	Brinn	Dynatech	Intercomp
Integra Springs	Integra Shocks	Kirkey	Klushman
KSE Racing	Mitchell Machine	Moog	MSD Ignition
Rebco	Simpson	Sweet Mfg.	Tilton
Wilwood			

AND MANY MORE....



## **WE WANT YOU TO OBTAIN THE BEST PERFORMANCE POSSIBLE**

So please help us help you! By following the guidelines, we feel that you will get the maximum performance from your Terminator built car. Proper maintenance is the key to winning races and the following information will help you reach that goal!

As a service to every Terminator customer, your initial scale and align charge will be waived when you purchase a new chassis from us. We ask that you follow our “starting point list”, which can be found on the following page before bringing your car to us to scale and align.

Cars that are brought here for set up that do not meet that criteria will be charged the hourly shop rate for however long it takes to prepare the car for set up. So please come here prepared!!

Our technical lines are very busy, and we ask that you please read this information before calling us with questions. The majority of the questions we answer on our tech lines are located in the set up manual, so please read it. If you do not understand something you read in the manual, call us; we will be happy to help you understand it.

Our shop rates are as follows:

Scale:	\$250
Align:	\$75
Shop Labor/hr	\$65
Install Brackets on Rear End:	\$200
Powder Coat Chassis:	\$450

Component group installation charges can be found in our price list.

**\* Prices are subject to change without notice.**

## **General Chassis Recommendations**

When setting up your chassis, we recommend that you follow the same procedures every time in order to get the most consistent results. The following is a starting point list, and if you are bringing your car to us to scale, please complete the list before bringing it here:

- 15 gallons of fuel in the cell.
- Install "scale tires." You should try to use the same set for consistency purposes
- 0-1/2" Stager on the front. 1/2-1" Stager on the rear.
- Correct wheel offsets: see below
- Check ball joints, tie rod assemblies, shocks, upper and lower "A" frames and center links, to make sure they are not bent or bound in any way. All of these will cause scaling, problems, not to mention chassis handling problems.
- Set ride height and front end alignment. Front end needs to be close to having the correct camber.
- Everything must be complete to insure an accurate set up.
- Cars brought here for set up that do not meet the above criteria will be charged the hourly shop rate for how ever long it takes to prepare the car for set up: please come prepared!!
- Before calling us with scaling questions or problems, please complete the above list.

The following is a weekly list that you should follow in order to maximize the performance and consistency of your chassis:

1. Install scale tires with proper wheel offsets
2. Check fuel level (should be 15 gallons)
3. Unhook shocks unless using gas pressure shocks (Bilstien)
4. Set ride heights
5. Set front end alignment
6. Check total weight and balance
7. Add weight (if needed)
8. Reset ride heights
9. Set correct percentages
10. Reset front end alignment
11. Hook up shocks
12. Check car completely

# Set Up Procedure

1. **Install scale tires**, with proper wheel offsets. You should have a set of tires and wheels (with correct offsets) that you use for scaling purposes. This will eliminate one variable and make it more consistent when you scale. If not use your race tire with the proper offsets, stagger, and air pressure.

## Stock Car

### Wheel OffSet

LF: 2" offset  
RF: 2" offset  
LR: 2" offset  
RR: 4" offset

### Air Pressure

LF: 14 psi.  
RF: 20 psi.  
LR: 16 psi.  
RR: 18 psi

## Hobby Stock

### Wheel OffSet

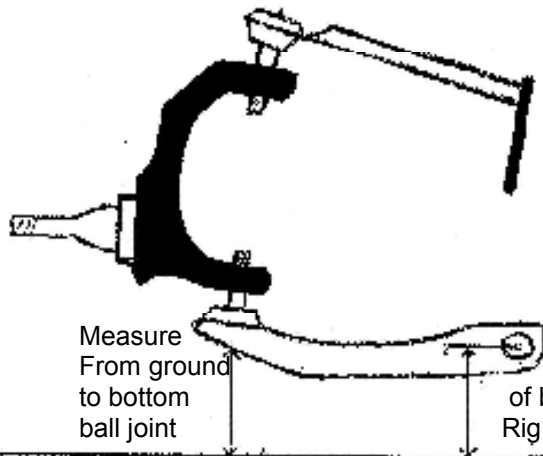
LF: 3" offset  
RF: 3" offset  
LR: 3" offset  
RR: 4" offset

### Air Pressure

LF: 24 psi.  
RF: 30 psi.  
LR: 26 psi.  
RR: 28 psi.

2. **Check fuel level.** You should always have the same amount of fuel in your cell when you set up your car. We recommend 15 gallons, as normally that would be what your car will have in it at the end of the race. If your track turns dry slick, having a larger fuel cell, like 22, will enable you to add more fuel and get a higher rear weight percentage.
3. **Unhook the shocks** unless using gas pressure shocks such as Bilstein shocks.
4. **Set your proper ride heights.** These **"MUST"** be as close as possible to keep the geometry the proper in the race car.

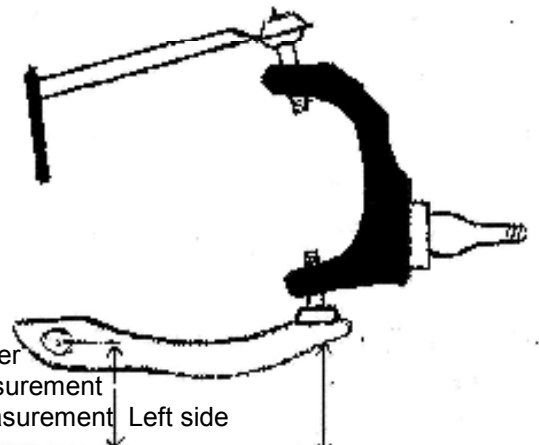
### Right Front Frame Height



Measure ground to center of bolt. +1" from outside measurement  
Right side & 1/2-1" outside measurement

+1

### Left Front Frame Height



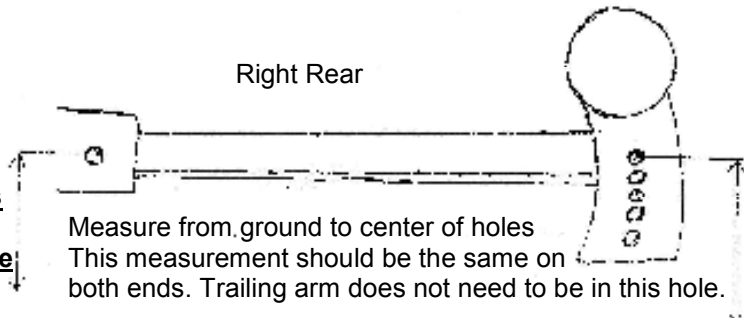
+1/2 - 1"

Do not worry about Left Rear

Right Rear

These are Stock Car frame heights

Hobby Stock you need to go off the Spring heights.



Measure from ground to center of holes  
This measurement should be the same on both ends. Trailing arm does not need to be in this hole.

5. **Set front-end alignment** to the follow settings.

	<b>Caster:</b>	<b>Camber:</b>
Left Front:	2 ° (+)	1° (+)
Right Front:	3 to 6 (+) *	3 ½° (-)
Toe Out:	1/8"	

\*When setting Right Front Caster, you may choose to vary this due to driver preference.\*

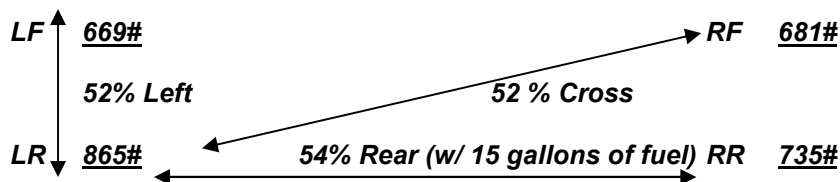
Toe in is set off of the right tie rod. To set your toe, have someone spin the tire and another person spray paint a line in the center of the tire as the wheel is spinning. Then scribe a straight line through the center of the paint as the wheel is spinning again. Now, repeat this process with the other front tire. When the paint is dry, roll the car forward and backwards (5 to 6 feet will do) to take the scrub out of the tires. Now you are ready to take the toe measurement. With one person on each side of the front of the car, slip a tape measure in between the tires, at the highest point possible on each side of the tire. It is important that both the front and backside measurements are taken at the same place on each side of the tire. For example, if you can only get your tape measure to clear 1/3 of the way up the backside of the tire, then you should use 1/3 of the way up the front side of the tire as well. The difference between your front and rear measurement is your toe out or toe in. For example, if the front measurement is 78" and your rear measurement is 77 7/8", then you have 1/8" toe out.

**NOTE:** If you are certain that you drew the line on the tire straight, but when you look at the drawn line on the tread of the tire, it does not look straight and wanders from the left to the right, that means either you have a bent wheel, or possibly a broken bead on your tire. You should check this problem further at this point.

6. **Check your weight balance** (front to rear, left to right, and diagonal RF/LR). If you need to add weight to make your car legal at your track, it should be added now. Add weight to arrive at the proper balance for the left and rear percentage. No weight should be added to achieve the proper diagonal percentage. Diagonal percentage can be added through the suspension. After adding weight, the ride heights will need to be reset. This is a baseline set up. Your proper rear percentage setting will vary depending on the track conditions.

**LEFT SIDE: 51 ½% to 52 ½% REAR: 52 ½ % to 54 ½ % Left Rear Bite: 125# Cross 52%**

**Example for figuring weight percentages, with a total car weight of 2,950#:**



- **To figure left side percentage:** add left front weight to left rear weight, divide by total car weight. In this example,  $669 + 865 = 1,534 \div 2,950 = 52\%$
- **To figure rear percentage:** add left rear weight to right rear weight, divide by total car weight. In this example,  $865 + 735 = 1,600 \div 2,950 = 54\%$
- **To figure diagonal percentage:** add left rear weight to right front weight, divide by total car weight. In this example,  $865 + 681 = 1,546 \div 2,950 = 52\%$

You should achieve these approximate percentages with the driver in the car. The weights on the previous diagram are approximate and a baseline set up. Depending on what type of components you use and which type of chassis you purchased your wheel weights will vary from the example.

7. **Add weight if needed.** Most tracks have a minimum weight rule; if that is the case you will probably have to add weight to your car. Most tracks include the driver in the total car weight, so keep that important point in mind when figuring the amount you will need to add. Also most sanctioning bodies require the weights painted white with your car number and secured with two 1/2" bolts for each piece of weight no matter what it weighs. When adding weight to the chassis it is very important to understand **balance** and how adding weight will affect the handling of your chassis. The location of weight added to the chassis will have a large affect on handling also. Depending on how much weight you have to add, some weight can be added by the drive shaft hoop. This weight is very neutral and will hardly change any percentages. However too much weight to low will change the center of gravity. If you need to add a large amount of weight some will need to be added closer to the center on the main cage "X" bars or you can add weight in front of your fuel cell. Adding weight to far back such as behind the fuel cell can cause a pendulum affect causing the car to go from a tight condition to a loose condition quickly depending on corner entry.

Before you ever add weight on the racecar at the track, it should all be added at home and documented when scaling your car. Adding weight without knowing how it will affect your percentages can cause other handling problems. Make a chart with the weights added in different locations. This will help you understand how weight affects the **balance** of your racecar. The other element is fuel loss and the desired rear percentage at the end of a race. To compensate for fuel loss you might choose to add additional weight to the rear. For example, if you normally burn 15 gallons of fuel during a feature you would need to add 100 pounds on to offset this. (Alcohol weighs 6.58 lbs. /gal. X 15 gal. = 98.7 pounds.) If you put 40 pounds in front of the fuel cell you'll need to put 35 on the right rear rail, and 25 pounds on the left rear rail and to keep the diagonal and left side percentage the same. Keep in mind that weight transfers better the higher it is placed (with in reason). You may want to experiment with locations. If you choose to add more (than the 100lbs in the previous example) weight to increase your rear percentage you will want to raise the chassis up.

**Driver Tip:** *With a high rear tail percentage you will want to driver the car straighter on corner entry to gain the forward bite off the corner that high rear percentage will give you. Your corner entry speed may need to slower to increase exit speed.*

8. **Reset ride heights.** Go back to step 4 and reset your ride heights.
9. **Set correct percentages.** Go back to step 6 and make sure that your car has the proper weight percentages.
10. **Reset front-end alignment.** Go back to step 5 and make sure that your car has the proper alignment settings.
11. **Hook up the shocks.** Before hooking the shocks back up, check them to insure that they are in good working conditions. Compress and decompress them a few times. Check for any binds, air spots or dents. If you discover any of these problems, you will need to replace the shock. Worn shocks will cause inconsistencies in your car's performance. Now go ahead and hook the shocks back up.
12. **Check car completely.** Races are won with proper maintenance! The above list is a good starting point for weekly maintenance on your car. Also keep in mind that the more you race the more maintenance your car will need. You should complete this list after each night of racing.

- **Spring and Shock Rates:**

	<u>Stock Car</u>		<u>Hobby Stock</u>	
	<u>Springs</u>	<u>Shocks:</u>	<u>Springs</u>	<u>Shocks:</u>
LF:	1100lbs, 5 ½"x9 ½"	50/50 or 76	1000lbs, 5 ½"x11"	SAK 1043
RF:	1200lbs, 5 ½"x9 ½"	55/70 or 77	1100lbs, 5 ½"x11"	SAK 1043
LR:	200lbs, 5"x16"	40/10 or 94	200lbs, 5"x11"	SAK 1044
RR:	175lbs, 5"x16"	40/40 or 94	175lbs, 5"x11"	SAK 1044

- These are baseline recommendations for your car. Variables, such as track condition, length, banking and speed will make changes necessary to obtain higher performance and response from your car. If you need to tighten the car on corner entry, you can stiffen the left front spring by 50lbs. If you need to loosen up the car on corner entry you can soften RF spring by 50lbs. If you need to tighten the car up on corner exit, stiffen LR spring 25lbs or soften RR spring by 25lbs.
- The following is a list of shock possibilities for your car, and their more common uses.

75	40/40	Softer Left Front
76	50/50	Standard Left Front
77	60/60	Standard Right Front
76-2	30/50	Right Front, Tracks with slow corners, very dry-slick & smooth
76-4	30/60	Right Front, Tracks with fast corners, very dry-slick & smooth
76-5	55/70	Right Front, Tracks with fast corners, some what dry slick
75-6	60/30	Right Front, Tracks with slow corners, heavy conditions
93	40/10	Left Rear, Tracks with slow corners, dry slick conditions
93-5	60/10	Left Rear, Tracks with fast corners, dry slick conditions
94	40/40	Left Rear, Tracks with fast corners, heavy conditions
94	30/30	Left Rear, most track conditions
94	40/10	Right Rear, All tracks with dry slick conditions
95	40/40	Right Rear, All tracks with tacky conditions

- **Track Size & Condition Variations:**

Heavy-flat tracks: Use standard springs. Increase your stagger in the rear. Move left trailing arm to the middle hole and right to the bottom hole on the rear-end. If your car is too tight at this point, decrease the rear percentage. Only make one change at a time!!!

Heavy High-Banked Tracks: We recommend that you use a 77 right front shock to slow down the roll on corner entry. Use your standard springs increase the stagger in the rear. Move both trailing arms to the middle set of holes on the rear-end.

Smooth Dry Slick-Flat Tracks: We recommend that you use one of four split valve shocks on the right front wheel. Use a 76-4 for dry conditions and a 76-2 on extremely dry track conditions; in both cases on a relatively average size track. Again, be careful when using split valve shocks on a rough track, the split valve could tend to upset the handling of the car. A 93 shock on the right rear can help the car coming off of the corner if the corner exit speed is slow (very dry-slick only). Increase LR spring rate by 25 lbs or reduce RR spring by 25 lbs. Sometimes we recommend an extra weight on the RR to promote body roll and side bite as you tighten the car up. Again, remember to only make one change at a time!!



- **Additional Notes:**

Trouble shooting handling problems must be done in an orderly manner beginning at the flagman, though corner entry, apex, exit and straight chute. Don't try to fix problems out of this order, because many times the cause of a later problem is related to an earlier one. A corner entry problem can help contribute to a corner exit problem. Fixing the corner entry problem will normally help fix the exit. A car that is too tight getting into the corner has the tenancy of being too loose coming off of the corner.

It's very important that spring split be kept within a balanced range. As a general rule, front spring split should be kept between 0-100 lbs. Rear springs should be 25 lbs to 50 lbs (usually heavier on the left side) in difference. Some track conditions may require for no split, or as much as 75 lb.

The effects of shock absorbers on body movement are temporary. They will temporarily hold the car up or down. A soft shock is more temporary than a stiff shock. However, in all cases the springs will provide the final effect. Shocks can only control spring actions not create them.

Sometimes you can have everything adjusted and tuned properly and still not be able to hook up. Don't forget the driver. Some adjustment is sometimes necessary here, too. Slowing the steering can promote smoothness as well as increasing the stroke on the gas pedal. Remember, smoother is nearly always quicker. Engine combinations also play a large part in forward bite. With an 8" tire you can only use so much horsepower!

It is important to know what happens to the rear tires when suspension moves up and down. Rear end steer under body roll and weight transfer can be valuable tuning area when working on corner entry and body roll problems.

More left side weight percentage can cause a loose condition on corner entry. More rear weight percentage can cause a push on corner entry and exit but it makes a rear hang out in the middle of the corner.

Excessive left rear bite can cause looseness getting in (the left rear gets more traction under braking and wants to turn the car) and looseness coming off the corner (the tire loading is so uneven that neither tire works properly). Keeping bite in the 60-140 lbs range will work in nearly all conditions. If you find yourself believing that a significant change in bite or rear percentage would help your car do what you want it to, you may be better off to make spring. Shock changes to promote bite. Avoid any set up numbers on your car that show an out of balance condition.

Rear tire stagger affects handling more than just the time when the car is accelerating. Keep in mind that the larger tire has more contact patch and usually more bite so the same qualities that turn the car when on the gas can cause the car to have difficulty turning when on the brakes. Adjusting brake bias can overcome some problems created by large amounts of stagger.

Side bite is sometimes confused with forward bite. If the car tails out in the corner when on the gas, making changes to increase side bite won't help. You need to concentrate on forward bite. Remember, the quicker you can get on the gas and go forward the sooner the car stops going sideways.

Moving the right side tires more in line with each other will effects bite coming off corners. Moving the right rear out will loosen the car on corner entry and exit.

Brake pads should always be matched front to rear as far as compounds are concerned. Even when different sizes are used, compounds should be the same. Using mismatched pads can cause the problems during early stages of the races when brake temperatures are not stabilized.

Similarly, you should only run either the big GM calipers or the small Gm Metric calipers-never run a mix of the two.

A smaller master cylinder produces less volume and more pressure. Consequently, a smaller cylinder to the rear will give more rear brake while requiring some additional pedal stroke.

Proper balance in brake bias is extremely important in corner entry. If a car is too tight (or pushing) getting into the corner, by adjusting brake bias to the rear it will tend to loosen up the car. If a car is too loose getting into the corner, the opposite tends to apply.

The rubber seals and gaskets that are found in most racing type master cylinders are not compatible with silicone type brake fluid. Use a high temp Glycol based DOT 3 racing fluid for dependable performance.

The DOT designation on brake fluid indicates not only minimum boiling points but also other specifications such as compressibility, corrosiveness, moisture absorption, viscosity, chemical base and other. With all things considered, a high temp, DOT 3 Glycol based fluid, such as Wilwood Hi-Temp, is best suited for racing brake systems.

Due to the fact that the cars are now going faster, your brake system requires more frequent maintenance. Areas of concern are: brake fluid (due to overheating). Additionally, you should look for these potential brake problems:

- Brake pads wearing at an angle. Due to the fact that the brake mount is most likely misaligned it could cause your brake pads to wear at an angle. You need to also check them often.
- If your balance bar hits your bolt on the pedal assembly, this will cause inconsistency in bias and possible bind. To fix, wire tie to make sure that the balance bar is in center so that the bar does not hit the bolt. Or you can tap a bolt from the bottom up with a 3/8" bolt. Call if you have any brake problems. Brakes are very important part of your racecar.

NOTES: \_\_\_\_\_

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**WEEKLY MAINTENANCE CHECK LIST** DATE: \_\_\_\_\_ MOTOR: \_\_\_\_\_

- \_\_\_\_\_ Check Oil Change If Needed (#of laps to date \_\_\_\_\_ ) Check Filter
- \_\_\_\_\_ Check Water Level
- \_\_\_\_\_ Check Power Steering Fluid
- \_\_\_\_\_ Check Brake Fluid – Change If Needed
- \_\_\_\_\_ Check Clutch Fluid
- \_\_\_\_\_ Check Tranny Fluid Change If Needed (# of laps to date \_\_\_\_\_ )
- \_\_\_\_\_ Check Rear-End Fluid Change If Needed (# of laps to date \_\_\_\_\_ )
- \_\_\_\_\_ Check Brake Pads & Rotors
- \_\_\_\_\_ Clean Rotors & Wheel Studs
- \_\_\_\_\_ Check All Hubs
- \_\_\_\_\_ Check Pack Wheel Bearings (# of laps to date \_\_\_\_\_ )
- \_\_\_\_\_ Check Drive Flanges & Axles – Anti Seize Or Grease
- \_\_\_\_\_ Check Shocks – Remove From Car & Dyno If Needed
- \_\_\_\_\_ Check Springs
- \_\_\_\_\_ Check Inspect Ring Gear & Pinion
- \_\_\_\_\_ Grease Front End / Drive Shaft & Gas Pedal
- \_\_\_\_\_ Check Fuel Level – Record Amnt. Used Put To Scale Level
- \_\_\_\_\_ Charge Battery
- \_\_\_\_\_ Straighten, Repair, Replace Body Panels, Bumpers & Braces As Needed
- \_\_\_\_\_ Clean & Lube Brake Adjuster
- \_\_\_\_\_ Bleed Breaks & Clutch
- \_\_\_\_\_ Install, Take Off Or Move Led
- \_\_\_\_\_ Check Caster Camber & Toe
- \_\_\_\_\_ Check Front & Rear Suspension & Suspension Bolts – Run Through Travel
- \_\_\_\_\_ Check All Other Nuts & Bolts
- \_\_\_\_\_ Check Frame For Cracks Or Bends
- \_\_\_\_\_ Check Timing
- \_\_\_\_\_ Check Valves
- \_\_\_\_\_ Check Float Levels & Fuel Pressure
- \_\_\_\_\_ Check Or Replace Fuel Filter
- \_\_\_\_\_ Check Inspect Belts, Hoses & Linkages
- \_\_\_\_\_ Check Headers & Collectors
- \_\_\_\_\_ Check Clean Air Filter & Breathers
- \_\_\_\_\_ Check Lubricate Carb Linkage



**TERMINATOR STOCK CAR SCALE AND SET UP**

WHEEL WEIGHTS            LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

SPRING WEIGHTS        LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

SHOCK VALVING         LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

RIDE HEIGHTS            LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

SUSPENSION HEIGHT    LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

CASTER/CAMBER        LF: \_\_\_\_ \* \_\_\_\_ \*RF: \_\_\_\_ \* \_\_\_\_ \*TOE: \_\_\_\_\_ inches

TIRE PRESSURE         LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

WHELL OFFSET         LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

STAGGER                 FRONT: \_\_\_\_\_ REAR: \_\_\_\_\_

TIRE CIRCUMFRENCE:   LF: \_\_\_\_\_ RF: \_\_\_\_\_  
    LR: \_\_\_\_\_ RR: \_\_\_\_\_

TRAILING ARM POSITION   LR: \_\_\_\_\_ RR: \_\_\_\_\_

FUEL AMOUNT            \_\_\_\_\_            TOTAL WEIGHT \_\_\_\_\_  
                                       CROSS %            \_\_\_\_\_  
                                       LEFT %             \_\_\_\_\_  
                                       REAR %            \_\_\_\_\_  
                                       BITE                \_\_\_\_\_

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



LOCATION: \_\_\_\_\_

DATE: \_\_\_\_\_

**HEAT:**

COLD/HOT

COLD/HOT

Tire Pressures:

LF: \_\_\_\_\_ / \_\_\_\_\_  
LR: \_\_\_\_\_ / \_\_\_\_\_

RF: \_\_\_\_\_ / \_\_\_\_\_  
RR: \_\_\_\_\_ / \_\_\_\_\_

Tire Size

LF: \_\_\_\_\_ / \_\_\_\_\_  
LR: \_\_\_\_\_ / \_\_\_\_\_

RF: \_\_\_\_\_ / \_\_\_\_\_  
RR: \_\_\_\_\_ / \_\_\_\_\_

Tire Temps

LF: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
LR: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

RF: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
RR: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Shock Travel

LF: \_\_\_\_\_ RF: \_\_\_\_\_  
LR: \_\_\_\_\_ RR: \_\_\_\_\_

Start Finish

Fuel Level: \_\_\_\_\_ / \_\_\_\_\_

Lap #: \_\_\_\_\_ Best Lap Time: \_\_\_\_\_ Max RPM: \_\_\_\_\_

NOTES:

**FEATURE:**

COLD/HOT

COLD/HOT

Tire Pressures:

LF: \_\_\_\_\_ / \_\_\_\_\_  
LR: \_\_\_\_\_ / \_\_\_\_\_

RF: \_\_\_\_\_ / \_\_\_\_\_  
RR: \_\_\_\_\_ / \_\_\_\_\_

Tire Size

LF: \_\_\_\_\_ / \_\_\_\_\_  
LR: \_\_\_\_\_ / \_\_\_\_\_

RF: \_\_\_\_\_ / \_\_\_\_\_  
RR: \_\_\_\_\_ / \_\_\_\_\_

Tire Temps

LF: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
LR: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

RF: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
RR: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Shock Travel

LF: \_\_\_\_\_ RF: \_\_\_\_\_  
LR: \_\_\_\_\_ RR: \_\_\_\_\_

Start Finish

Fuel Level: \_\_\_\_\_ / \_\_\_\_\_

Lap #: \_\_\_\_\_ Best Lap Time: \_\_\_\_\_ Max RPM: \_\_\_\_\_

NOTES:

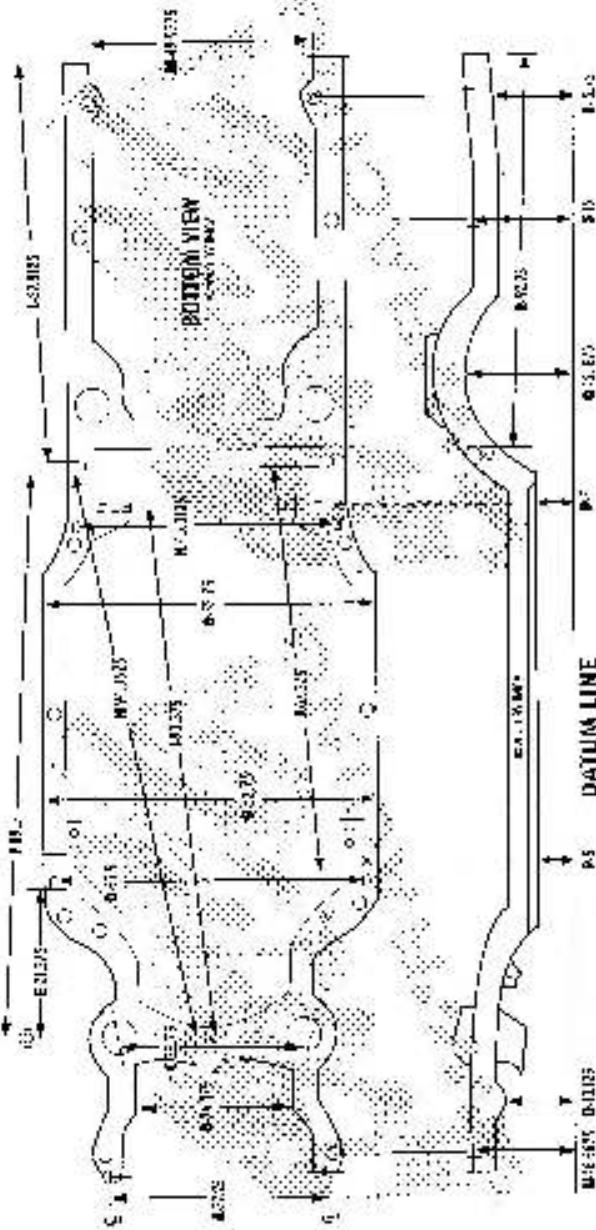


<b>STOCK CAR &amp; HOBBY STOCK ADJUSTMENT GUIDE</b>						
<b>Problem / Adjustment</b>	<b>Tight On Entry</b>	<b>Loose On Entry</b>	<b>Tight In Middle</b>	<b>Loose In Middle</b>	<b>Tight On Exit</b>	<b>Loose On Exit</b>
<b>LF Spring</b>	Soften	Stiffen	-	-	-	-
<b>RF Spring</b>	Stiffen	Soften	-	-	Soften	Stiffen
<b>LR Spring</b>	-	-	-	-	Soften	Stiffen
<b>RR Spring</b>	Soften	Stiffen	-	-	Stiffen	Soften
<b>LF Shock</b>	Less Comp.	More Comp.	Less Rebound	More Rebound	More Rebound	Less Rebound
<b>RF Shock</b>	Less Comp.	More Comp.	Less Comp.	More Comp.	More Rebound	Less Rebound
<b>LR Shock</b>	Less Rebound	More Rebound	Less Rebound	More Rebound	More Comp.	Less Comp.
<b>RR Shock</b>	Less Rebound	More Rebound	Less Comp.	More Comp.	Less Comp.	More Comp.
<b>LR Trailing Arm</b>	Less Angle	More Angle	Less Angle	More Angle	Less Angle	More Angle
<b>RR Trailing Arm</b>	Less Angle	More Angle	More Angle	Less Angle	More Angle	Less Angle
<b>Left Side %</b>	Increase	Decrease	Increase	Decrease	Decrease	Increase
<b>Rear %</b>	Decrease	Increase	Increase	Decrease	Decrease	Increase
<b>Cross %</b>	Increase	Decrease	Decrease	Increase	Decrease	Increase
<b>Ballast Height</b>	Lower	Raise	Lower	Raise	Lower	Raise
<b>Stagger</b>	More Front	Less Front	More Rear	Less Rear	More Rear	Less Rear
<b>Wheel Offset</b>	RF In LR Out	RF Out RR In	LR In	RF Out LR Out	RR Out LR In	RR In LR Out
<b>Air Pressure</b>	Less Front	More Front	Less RF More RR	More RF Less RR	More Rear	Less Rear
<b>Braking</b>	More Rear	More Front	-	-	-	-
<b>Tire Temps</b>	RF Hot	RR Hot	RF Hot	RR Hot	RF/LR Hot	RR Hot

**REMEMBER ONE CHANGE AT A TIME!!!**

**OVER ADJUSTING CAN BE JUST AS BAD AS UNDER ADJUSTING!!!**

# 2009 IMCA CH Modelize 78-87 Frame Dimensions



- Dimensions are to either the top or bottom surface of the frame rail as indicated.

- All dimensions must be within 0.250-inch tolerances. Exceptions are indicated.

- All surfaces are finished to verify as crash damage.

- A. 21.25 - distance from center to center of longer shaft holes (strip 1/8" x 1/4" x 1/8")
- B. 25.875 - refers to holes between shaft holes (strip 1/8" x 1/4" x 1/8")
- C. 25.750 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- D. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- E. 21.25 - distance from center to center of longer shaft holes (strip 1/8" x 1/4" x 1/8")
- F. 25.875 - refers to holes between shaft holes (strip 1/8" x 1/4" x 1/8")
- G. 25.750 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- H. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- I. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- J. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- K. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- L. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- M. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- N. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- O. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- P. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- Q. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- R. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- S. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")
- T. 25.875 - refers to distance between shaft holes (strip 1/8" x 1/4" x 1/8")

When American Casting is used, the dimensions are in inches unless otherwise noted.

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