Hoffman Race Cars
Set Up Sheet

Recommended Springs	Recommended Shocks	Recommended Wheel Offsets
LF 700 RF 750	LF 7M3535 RF 7M3050	LF 3off RF 3off
LR 225 RR 200	LR 9Z3050 RR 9Z3030	LR 3off RR 4off
Hyperco	Bilstein	Diamond

Recommended Stagger	Recommended Tire Pressure	Recommended Front Alignment
Front ½"	LF 9 RF14	Camber LF+13/4 RF-3 1/4
Rear 1"	LR 9 RR 14	Caster LF+2 RF+5
		Toe 1/8 out

Recommended Frame Heights Recommended Rear End
LF 5 ½" RF 5 5/8" 60" Centered Pinion
LR 6 5/8" RR 6 3/4"
LR 7 5/8" RR 7 3/4" (Newer style cars w/2x2 square) Late 2005 changed to 2x2 square

Frame Height Locations

Measure front ride heights from floor up to the lowest point on the front side of the factory frame behind the front tires.

Measure rear ride heights from floor up to bottom of 2x3 or 2x2 on frame just outside of where link mount is welded.

Remember these are recommendations, someplace to start. I am not saying you have to run 3off wheels on the front, just weigh your car out w/th same offsets & tire stagger every time so you have the same base starting point every time you scale your car. Always begin scaling w/20 gallons of fuel. I like to run a 25 lb chunk of lead in front of fuel cell. I like to set the camber, caster & toe before weighing. Always get rid heights set before setting front end. When setting toe make sure idler arm & pitman arm are running straight w/car, parallel w/ frame horns, Meaning not running off to the left. After doing this you are ready to square & center rear end in car.

Squaring Rear End

Start off by getting your motor set back legal, it has to be 72" from front on the motor plate to the center of rear end. Set your car on the scales, hook your tape measure on the front side of motor plate & measure to the center of the rear end, make it 72 1/8",make sure pinion angle is set at 8 degrees when measuring motor set back The extra 1/8" gives you some tolerance for tech purposes. Do this measuring at the right side of the car. Now stand in front of car and make sure the front tires are running straight ahead, also look at it from behind. After the front tires are running straight, measure from the right front hub to the right rear hub. Then measure the left side the same way. Remember do not move the front wheels after you start measuring. I like to start off w/the rear end 1/4" to 3/8" shorter on the left then the right. Measure from the center of the ball joint on the right to the front of the rear end on the right, using a square or plumb bob.

Then measure the left the same way. When moving rear end forward or backward always remember to keep your birdcages indexed, meaning the rear bars at the birdcages are 90 degrees to each other, meaning the top heim is directly above rear end housing & bottom bar is directly below. Be sure to check pinion if you have to adjust rear bars a lot.

Centering Rear End

Now we will locate the rear end from left to right. Go to the right rear tire & face it, kneel down w/tape measure in hand & butt the tape measure up against the outside of the torque link bracket. Measure from the outside of the bracket to the outside of the right upper frame rail 14 ½". The more you move the rear end to the left the tighter the car should become, because this should promote roll & give you more side bite.

Pinion Angle

You are ready to set pinion angle, know. I recommend 8 degree. Shorten your swaged tube on your pull bar for more pinion angle , lengthen to take pinion angle out. After your pinion angle is set check pre load on pull bar spring, start out w/ 1/4 to 3/8 depending on spring & suspension type..

Rear suspension tech

4 Bar left Side of chassis

We use a 13" 5/8 swaged tube on top bar. I like to start w/ my left top 4 bar 22 to 25 degrees up hill to chassis. Start out w/ the left top bar in the back top hole on the birdcage. Make sure the birdcage is indexed level.

Tuning The Left Upper 4bar

Move bar up at chassis gives more traction or bite

Move bar down at chassis gives you less traction or bite

Indexing Left Top 4Bar upper At Birdcage

Moving the left upper 4 bar forward 2 inches to the hole at the front of the birdcage or to the lower hole in the bird cage gives your chassis more instant forward bite because the bird cage indexes into the spring quicker giving you more traction.

We use a 11" 5/8 swaged tube on the bottom. I like to start w/ my left lower 4 bar 5 degrees up hill.

Tuning the left bottom 4bar

Moving the left bottom 4 bar up frees car up when on the gas, puts more rear steer in car

Lowering the left lower bar tightens car when on the gas, this takes steer out

4 Bar right side

We use a 13 " 5/8 swaged tube on right top 4 bar. I like to run the right 4 bar at the top 1 hole lower than the left top 4 bar.

Tuning the right top 4 bar

Moving the right upper 4 bar up on the chassis tightens the car on entry & it will loosen on exit

Moving the right upper 4 bar down on the chassis loosens the car on entry & it will tighten exit

Right side z-link

We use a 11" 5/8 swaged tube on the bottom z-link bar. Start of with bar 5 degrees up hill to chassis.

Tuning bottom z-link bar

The more angle uphill to chassis the more steer it puts in rear freeing car up

The more you lower the bar the tighter the car will be, this takes steer out.

We use a 13" 5/8 swaged tube on the back bar. Start out w/ back z-link bar 5 degrees down hill. We have moved the back z-link bar forward & back, we have changed it from round to square, whatever length of rear swaged tube you use, make sure the birdcage is level at bottom or indexed straight up & down.

Tuning back z-link bar

The more angle down hill in back bar the more steer it puts in freeing car up.

The more you raise the back bar at the chassis the tighter the car will be this takes steer out.

Don't be afraid to raise the back bar up so it is uphill at the back, when the track gets real dry

4bar left 2link right.

We use a 16" 5/8 swaged tube on the right lower 2link bar. Start out w/ the right lower bar 2 to 5 degrees uphill to chassis.

Tuning right lower 2 link bar

Move right lower 2link bar up to free car up

Move right lower 2link bar down to tighten car

Torque link

I like to start out w/ a 1050 spring with a long or short pull bar. Start out w/ 15 degrees in the short pull bar in the center of car. The choice long or short pull bar is driver preference.

Tuning pull long or short

The more angle downhill you put in torque link the more forward bite you should have

The less angle you have you might not have as much instant traction but you should be able to drive through the center better depending on set up, taking angle out will also tighten your car up on corner entry.

The longer pull bar will tighten your car on corner entry, compared to the short one.

The longer pull might not have has much instant bite but should bite farther down he straightaway compared to the short one.

You can move pull bar to the left at the front & at the back to tighten car off of the turn.

Panhard bar

There are 2 types of panhard bars a j bar & a straight bar.

J-bar

Start w/ jbar 9" from bottom of 2 by 2 square panhard mount to the center of heim on the jbar & the other end of jbar bolt in the center of pinion on the gear. The more you move

the jbar up in the car the freer the car becomes, because this raises the roll center.The more you lower the jbar the tighter the car becomes, because you lower the rollcenter.

Straight bar

Start w/ straight bar 9 “3/4 tube center of pinion on gear,put angle finder on the straight bar & then raise on frame until you are 23 degrees down hill. Adjustments same as j bar