



BMS Challenger Set Up Sheet

Ride Heights:

- LF: 6" Between the ground and bottom of frame rail on outermost edge
- RF: 6" Between the ground and bottom of frame rail on outermost edge
- RR: 2 $\frac{3}{4}$ " between bottom of the axle tube and the top of lower frame rail

*Front ride heights will measure $\frac{1}{2}$ " higher when using Hoosier A40 Tires

Springs:

Chevelle Lower Control Arms

- LF: 650# RF: 600#
- LR: 225# RR: 200#

Sport Mod

- * LF: 700# RF: 700#
- * LR: 200# RR: 175#

Shocks:

Bilsteins

LF: 30/30 RF: 50/30
 LR: 20/60 RR: 50/30

Sport Mod

LF: 10/30 RF: 30/30
 LR: 20/60 RR: 20/20
 20/80

Upper Control Arm:

- Chevelle Frame: Swag Tube Lengths: Mars:
- LF: 6 RF: 6 LF: 7 RF: 5
- LR: 6 RR: 5 LR: 9 RR: 9

*Before 2007 swage tubes are reversed on Chevelle frames.

Front Wheel Alignment Settings:

- Caster LF: 2+ to 3+ RF: 4+ to 5+
- Camber LF: 4+ RF: 6-
- $\frac{1}{2}$ " to $\frac{3}{4}$ " toed out

Rear Bar Lengths:

- Measure Center to Center
- Upper Bars: 16" 4th hole up on left side 3rd hole up on right side
- Lower Bars: With extender plates 14" 4th hole up on left side 3rd hole up on right side (Move left extender plates up on left side for 28 Degrees angle on Sport mod)
- Right side without extender plates 20 $\frac{1}{4}$
- 16" Lower Bar on sport mod

Chain drop on left rear:

- 19" from top of rear end housing to bottom of shock tower.

Torque Link:

- 26 $\frac{1}{2}$ " (approx.) center with $\frac{1}{4}$ " preload
- 1200 # spring recommended or 1000/1600 progressive
- Middle hole of housing
- One hole up from bottom on frame

J-Bar (approx.) 21":

- Chevelle: Left side 5" between bottom of bracket and top of frame rail
Right side level with pinion or the next hole down.

*Center rear-end housing by measuring inside left rear rotor to frame rail 12" at ride height

**NOTE: Rotors should be mounted outboard-make hub and rotor wide as possible

Birdcage Placement:

- BSB birdcage 6" from inside rotor to outside of top birdcage ear

Wheel Offsets: Sport Mod

- LF: 2" off RF: 2" off * LF: 3" off RF: 3" off
- LR: 2" off RR: 3" off * LR: 3" off RR: 4" off

Tire Pressure:

- LF: 12" RF: 14"
- LR: 10" RR: 12"

Tire Stagger:

- Front - 0 to 1"
- Rear - $\frac{1}{2}$ to $1\frac{1}{2}$ "

Scaling Percentages:

- 52% to 53% Left side weight
- 57% to 60% Rear weight
- 48% to 52% Cross weight
- 0 # to 50 # Left rear bite (w/o driver)

*All figures are for an average 200lb. driver. Example: If you weigh 250lbs. add 50lbs. in drivers cockpit when scaling.

Pinion Angle:

- Measuring 9010 shock shaft from body of shock to the slide indicator should be approx. $2\frac{1}{2}$ " - this will give you 8 to 10 degrees pinion angle.
- Sport Mod 3 to 4 degrees pinion angle.

Adjustment Guide

	Tight On Entry	Loose on Entry	Tight In Middle	Loose In Middle	Tight On Exit	Loose on Exit
LF Spring	Soften	Stiffen	*	*	*	*
RF Spring	Stiffen	Soften	*	*	Soften	Stiffen
LR Spring	Stiffen	Soften	*	*	Soften	Stiffen
RR Spring	Soften	Stiffen	*	*	Stiffen	Soften
Pan-Hard Bar At Pinion	Raise	Lower	Raise	Lower	*	*
Pan-Hard Bar At Frame	Lower	Raise	Lower	Raise	*	*
LR Top Rod Frame	*	*	Lower	Raise	Lower	Raise
LR Bottom Rod	Raise	Lower	Raise	Lower	Raise	Lower
RR Top Rod	Lower	Raise	*	*	Raise	Lower
RR Bottom Rod	Raise	Lower	Raise	Lower	Raise	Lower
Ballast Height	Lower	Raise	Lower	Raise	Lower	Raise
Left Side %	Increase	Decrease	Increase	Decrease	Decrease	Increase
Rear %	Decrease	Increase	Increase	Decrease	Decrease	Increase
Diagonal Wedge	Increase	Decrease	Decrease	Increase	Decrease	Increase
Trail RR Wheel Base	Lengthen RS	Shorten RS	Lengthen RS	Shorten RS	Lengthen RS	Shorten RS
Air Pressure	Increase RR	Decrease RR	Increase RR	Decrease RR	Increase RR	Decrease RR