Description: Camber Kit
Part Number: 450-401009-A
Application: 1997-2004 C5, 2005-2013 C6 Steel Frame

Tools Needed:

3/8" drive ratchet 24"
long 3/8" torque wench
10mm deep socket
13mm socket
13mm deep socket
15mm socket
18mm deep
socket 22mm socket
lug nut socket (stock 19mm)

15mm flex head ratchet wrench
6mm open end wrench
13mm combination wrench
22mm combination wrench
vice grips
1/2" drive breaker bar
1/2" drive torque wrench
floor jack
jack stands

The purpose of this kit is to simplify the alignment process and correct the factory shortcomings. The camber plates have different hole placements and are identified by the notches on the bottom.

Front:

- Using proper jacking points, lift and support the front of the car on jack stands.
- The front kit contains camber plates (spacers) and bolts to replace the factory eccentric bolts and washers.
- Use the camber plate #6 (6 notches on the bottom).
- Remove eccentric bolts from lower control arm, do not worry about the soft aluminum sleeve. -You will not reuse the bolts or sleeves.

Lower Control Arm

- One plate goes on each end of the bolt.
- All plates should be installed so that the rounded corners face up.
- Install the camber plate #6 (6 notches on the bottom) with the hole towards the outside of the car towards the outside of the car as shown in figure 1.
- You may have to pry the lower control arm out to get the bolt to align in the control arm.
- Tighten the bolts to **80 ft/lbs** of torque.


Fig. 1

Upper Control Arm

- Remove the bolts from the upper control arm. Move the control arm out of the way.
- Install the studs in place of the bolts and use Loctite to hold them in.
- Many cars have washers installed behind the upper control arm ‘dogbones’. You can chose to leave those washers in place, as they will eliminate the need to use as many shims. In cases where more negative camber is desired, remove the washers, to gain additional negative camber.
- Reinstall control arm back over the studs.
- Install locking nuts and snug them down.
- Repeat on other side.
- Install wheels and check alignment for camber settings. Use shims to correct alignment to desired camber.

A 1mm shim placed on each stud is approximately 0.2 degrees of camber.

- After camber is set, measure caster.
- To set caster, do not change the total number of shims, Move shims from rear of control arm to the front or vice versa.
- Re-check camber and torque upper lock nuts to **25 ft/lbs.**

RECHECK ALL WORK!!

REAR:

- Using proper jacking points, lift and support the rear of the car on jack stands.
- All of the settings are achieved with the **lower front** pivot bolt.
- Remove factory bolts from front pivot of lower control arm.
- Replace the bolt and eccentrics with the bolt provided and two of camber plate #3 (3 notches). The hole should move the bolts toward the outside of the car.
- Loosely install bolts for measurements.
- Reinstall wheels and measure camber.
- Change plates to correct camber until desired settings are achieved.
- One camber plate # **higher** should be about + 0.2 degrees of negative camber (more negative camber).
- One camber plate # **lower** should be about – 0.2 degrees negative camber (less negative camber).
- You may not end up with equal plates on both sides.
- Torque bolts to **80 ft/lbs.**
- Re set toe-in using factory adjusters
- **RECHECK ALL WORK!!**

Corvette Alignment Recommendations

These settings are a guide based on the experience and testing of aFe control and Pfadt Race Engineering. Toe specs listed in inches are intended to be measured using a toe plate with approximately 21-5/8" between notches for tape measures. Negative toe measurements indicate toe-in.

Performance Street - Track Use with Street Tires

Front	**min**	**max**
Camber (deg)	-1.1	-1.3
Caster (deg)	7.5	8.5
Total Toe	-1/16" (0.17˚)	0 (0°)
Rear		
Camber (deg)	-0.7	-0.9
Total Toe	-1/8" (0.33°)	-1/16" (0.17°)
Notes		

These settings will provide good all around performance. The tires will wear the inside edges in street use and the outside edges on the race track. This is a good dual purpose alignment.

Performance Street - Track Use with Race Tires

Front	**min**	**max**
Camber (deg)	-1.6	-1.8
Caster (deg)	7.5	8.5
Total Toe	-1/16" (0.17˚)	0 (0°)
Rear		
Camber (deg)	-0.9	-1.1
Total Toe	-1/8" (0.33°)	-1/16" (0.17°)
Notes		

These settings will provide great track performance. The tires will wear the inside edges in street use, and the car may tend to grab the lanes of the road. Race tires will wear well at the track and provide high levels of grip. This alignment is compromised towards track use.

Dedicated Track Car - DOT Tires, poly bushings

Front	**min**	**max**
Camber (deg)	-2.8	-3.0
Caster (deg)	6.5	7.5
Total Toe	-1/16" (0.17˚)	0 (0°)
Rear		
Camber (deg)	-1.5	-1.7
Total Toe	-1/8" (0.33°)	-1/16" (0.17°)

Notes

These settings are a good starting point for a car with polyurethane or stock control arm bushings. This alignment requires DOT race tires to function appropriately.
This is a starting point only, testing and monitoring tire temperatures and pressures are required to optimize any setup.

Dedicated Track Car - DOT Tires, Spherical Bearings

Front	**min**	**max**
Camber (deg)	-2.4	-2.6
Caster (deg)	6.5	7.5
Total Toe	-1/16" (0.17˚)	0 (0°)
Rear		
Camber (deg)	-1.2	-1.4
Total Toe	-3/16" (0.50°)	-1/8" (0.33°)

Notes

These settings are a good starting point for a car with mono-ball or spherical control arm bushings. This alignment requires DOT race tires to function appropriately.
This is a starting point only, testing and monitoring tire temperatures and pressures are required to optimize any setup.

Dedicated Track Car - Race Slicks, Spherical Bearings

Front	**min**	**max**
Camber (deg)	-3.0	-3.2
Caster (deg)	6.5	7.5
Total Toe	-1/16" (0.17˚)	0 (0°)
Rear		
Camber (deg)	-2.0	-2.3
Total Toe	-3/16" (0.50°)	-1/8" (0.33°)

Notes

These settings are a good starting point for a car with mono-ball or spherical control arm bushings. This alignment is designed and tested with race slicks, not DOT tires.
This is a starting point only, testing and monitoring tire temperatures and pressures are required to optimize any setup.

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