



CORVETTE

C5

COMMON PROBLEMS

To research ANY problem with your C5 Corvette, go to: www.corvetteforum.com, register to get an account user name and password. From there you can use their search function to find anything and everything about your vehicle.

A/ C SYSTEM

There are two kinds of climate controls. One is manual with knobs, and the other is a dual-zone electronic system. The dual-zone system did cost more, but is not as reliable as the manual system. A leaking battery can affect both systems. A strong system is when the vents cannot be switched.

Over time, and especially in humid climates, the system can cause condensation to leak onto the passenger side carpet. There are three udders under the driver's side cowl. There are slits on the bottom, much like real udders. Vigorously squeeze and massage the udders until the debris has fallen out. Stop laughing!

If the vent settings cannot be changed, the vacuum line is probably loose, clogged or broken. Read more!

ACTIVE STABILITY CONTROL

This allows you to keep some control of the car even when you do really stupid stunts. It doesn't bend the laws of physics, but will keep the car pointed where you are steering; you may still slide off the road, but at least the car will be pointed in the direction you were steering! One of the sensors is located around the passenger seat, and needs to be considered when installing a racing bucket. If you move that sensor, Active Stability will not know how to balance the car, and can be very dangerous. Active Stability came out around '99.

BELT CHIRPING

During cold weather, the belt can chirp. Goodyear Gatorback belts from AutoZone don't chirp.

CLIMATE CONTROL DISPLAY, DIM OR OUT COMPLETELY

All C5 climate control head displays have a tendency to go dim or out completely. Replacing it is very, very costly. The alternative is to repair your existing display head. Doing so involves removing the console and dash cover to get to the display head. Instructions can be found @ <http://forums.corvetteforum.com/c5-tech/1583758-c5-climate-control-dim-dark-display-fix.html>

DRIVETRAIN RATTLING

The valvetrain makes a significant amount of noise at idle. It may sound like sewing machine. Converting the valve rockers to true shaft-mounted adjustable roller rockers with may help eliminate the valvetrain noise if adjusted properly. Installing a big cam and stiffer valve springs will make the noise louder.

On manual transmission cars (M6 or M12), the transmission sounds like it is rattling when leaving the line. It is normal. It is the clutch throwout bearing rattling around. Sometimes you'll hear a horrible rattle if you shut off the engine. If you press the clutch pedal in while shutting off the car, you won't hear it.

EXTREMELY HIGH OIL PRESSURE READING

The oil pressure sensor can fail, but it is still okay to drive. Turn the car off, but with the key in the "on" position and check the oil pressure gauge. It should read "0". If the oil pressure sensor is bad, it will show a positive reading. The oil pressure sender is located behind the intake manifold, and will require moving the intake manifold. The sender costs about \$40 and part # 12573107 or 12562230. How-to

FAULTY GAS GAUGE

If you have bad gas (phew!), the fuel sender can be affected by the high sulfur content in the fuel, and cause the gauge to read empty. The car will still operate normally, and the gas gauge will work again if you use better gas, and will usually start again when you restart the car. It's just better to use good gas. Some people have had luck with running fuel filter cleaners thru the gas tank. New fuel senders sometimes fixes this problem. This thread has a LOT of ideas about what could be causing the problems, how to avoid problems, and how to fix it. It also points out how the late C5 fuel tanks and crossover tube is different.

GROUNDING PROBLEMS AKA CRAZY ELECTRICAL GREMLINS!

Bill Curlee has a great thread on the problems that corroded ground connections can create, and how to clean out the grounds. The most problematic ground connections are behind the headlights on both sides. Check out Bill's thread for detailed info: Here's where all the grounds are:

HEADLIGHT BEZEL PLUGS

There are 1-1/2" plugs that are located on the headlight bezels that would fall off on the older Vette's. The new style plugs, have a twist-lock to prevent them from falling out, but also requires new bezels. Only the new bezels & plugs are available now, and they are compatible with older C5's.

HEADLIGHT GEARS

The gears in the headlight motor are plastic, and wear out over time. Ice, heavy Euro or projector headlights and twilight sentinel will cause the gears to wear out quickly. Fortunately a few years ago, Rodney started selling replacement brass gears, check out his website. Corvette America and probably a few other vendors now sell their own copy of his brass gears. Here's a thread that shows how to replace the gears.

HOOD RATTLES

During cold weather the rubber hood stops can also rub and rattle against the hood. Adjust and lubricate the rubber stops so when you pull the corner of the hood up, it doesn't pull up, but the hood still closes.

HOOD SEAL WEATHER-STRIP

The sides and back of the hood compartment have weather-strip installed from the factory. The front is left open. Many owners install weather-strip along this front edge. You may not even notice it since it looks identical to rest of the weather-stripping. This extra weather-strip helps keep the engine compartment clean, and may also help the air intake system work better. This is another sign that the owner took good care of the car. The engine compartment stays pretty clean, but this the "extra step".

INSIDE/ OUTSIDE TIRE SPINNING

If one tire spins while turning, adjust the friction modifier ratio. Aftermarket gear fluid from Royal Purple, Amsoil and Redline do not require additional friction modifier. GM's friction modifier is PN #12377916. Too much friction modifier and the inside tire will spin/skip/hop. Too little friction modifier and the outside tire will spin/skip/hop. -- Thanks Russ!

INTERIOR RATTLES

The visors may rattle when they are put up, but if you flip them down, the rattle goes away. Squeezing the mirror lid down seems to take care of it. Try glueing a piece of felt or velcro between the mirror and lid to see if that fixes it. Caravaggio also makes replacement leather visors, but they go for \$400.

The stereo is Bose, and to go along with the historically crappy build quality of Bose products, Bose has graced the Corvette with Bose emblems on the door speaker covers that rattle when you play music with bass. A Bose system doesn't exist that puts out good bass, but the system still manages to rattle the emblems when playing Country, Hip Hop, or Techno at moderate volumes. Check this problem by having a passenger and yourself putting a finger on the emblems with music playing. Glue the emblems down to fix it.

If the roof isn't tightened down enough, it will rattle. There are some adjustment screws in the roof to make this adjustment.

JACKING

The C5 was the first car to use hydroformed frame rails. Hydroformed rails are quickly becoming a common platform for new cars, but not many shops are prepared to lift these vehicles. The C5 requires an adapter for regular jacks and lifts to fit the jacking points. Make your own adapters with a hockey puck (or two) with a 1 1/2" eye bolt screwed thru the center. Stick the eye bolt thru the slit in the jacking point, turn 90 degrees, place jack under adapter and jack away....if you can get the jack under the car. You may have to use ramps. The C5 is so low that most people make their own wooden ramps....rhino ramps are too steep.

KEY FOBS

There are basically two different kinds of key fobs, and they are not compatible with each other. 97-00, but 00 does not have the Passive Lock feature 01-04

LEAKY BUTT

The differential can leak from the side covers. The problem has to do with the design. The lip on the casing is not wide enough to create a proper seal with the cover. Resealing the covers can be successful, but many dealers do not use the correct sealant.

LEAKING BATTERY

Many C5's came with AC Delco Freedom batteries that had a tendency to have it's case crack open near the battery posts. The leaking battery acid would drip down the side of the battery, down the funnel-like battery support, straight down onto the PCM and the wiring loom. It can also get onto the A/C lines. I believe they are the vacuum lines that control the movement of the interior vents, and usually the system will default to blowing out the defroster vent. Sometimes car crippling damage would occur, sometimes not. It worst it would mean replacing the battery, the PCM, the wiring harness, grinding the rust off the frame to repaint it, changing the A/C lines and possibly swapping out another computer as well. This mostly happened on early C5's because later C5's used a gel-type battery that cannot leak, but I believe the problem resurfaced on '04 or '05 models again.

Check this out on any car you look at. Use a 8 mm monkey wrench, preferably a ratcheting closed-end version, to removed the battery cables. You also remove a holding block on the front side of the battery. You will need a long extension to reach it. The battery basically lifts right out. Also remove the black plastic battery tray. Look beneath the tray for rust or white powder. Signs of both are evidence of battery acid damage. It would probably be best to move to the next Vette unless you don't mind possibly tackling this repair in the future. It's possible that the car will throw codes for no apparent reason.

No matter what Vette you buy, just make sure you replace the battery with a gel-type battery, like the Optima Redtop, sold at CostCo for \$100.

LOCKED STEERING COLUMN

All C5's, particularly manual transmission C5's, and early C6 steering columns have a tendency to lock and stay locked. Usually it can be unlocked once, but just once. Some owners claim that vigorously shaking the steering wheel can unlock the steering wheel. Dealer's are able to disable the locking mechanism with a modified locking plate. Currently this is the only real method to disable the locking mechanism. Basically the wheel will still try to lock, but there will be nothing for it to lock to. It's like a door dead bolt with a slot cut into the door jamb. There is a \$100 kit that disables the steering column lock, and can be installed easily, but enough car vibrations can cause the lock to fall into the locking plate, even while driving!

GM has a part (#88952428 or 88952428) that has a harness wiring jumper and different lock plate. Not sure what the difference in the kits are.

After reading a few posts, manual transmission C5's & C6's are still in danger, even if the lock is disabled. The lock can vibrate out over time and get trapped in the locking plate. Auto transmission cars that have undergone the recall and new auto's will not have the locking plate at all, so they are safe. More information about COMPLETELY disabling the steering column lock will be forthcoming from other's on the forum, and by my own personal project. Until then, here are a few links about the topic:

Corvette Forum - Column Lock Harness K Installation

Corvettemechanic - A4 non locking column plate --- must be a member

Corvette Forum - Column-lock again even with CLB!

Corvette Forum - Has anyone ELSE beat column lock?

NOISY FUEL PUMP

There are two fuel tanks, and two fuel pumps. One fuel pump continually pumps gas from the passenger side tank into the driver side tank, and is quiet. The main fuel pump is directly behind the drivers seat, and can be annoying loud, especially on early C5's. It's normal, and not a sign of a failing fuel pump. Chevrolet does have a bulletin out instructing how to better insulate against the sound of the fuel pump. This is merely an annoyance. A newer, quieter pump can also be installed.

OIL WOES

Many late 2000 thru 2001 Vette's burn a lot of oil when the engine is kept constantly over 4,000 rpm's. This is caused by ring flutter, which allows extra oil to seep past the oil control rings, but doesn't seem to cause any extra wear to the engine. Chevrolet has rebuilt and replaced engines for owners that complained about excessive oil consumption. Their policy is that while the engine isn't normally operated like that outside of racing, it is the owner's prerogative to drive around in second gear all the time if they want to. It is covered under the warranty.

The PCV system also has a tendency to suck oil back into the intake at high rpm's. It doesn't seem to cause any problems, other than a slight mess inside the intake manifold. The newer style PCV system can be installed, but this requires removing all the components in the top of the engine valley. Usually only racer's bother with the hassle. Several generations of PCV systems have had the problem, and at this time, December 2004, the PCV system still sucks oil into the intake.

The oil-sucking problem will cause carbon buildup in the cylinders. The dealership sells GM Top End Cleaner, and Napa sells SeaFoam. The Top End Cleaner is not available in some smog states like California. Run a tube from the bottle into the hole for the PCV system behind the throttle body on the passenger side. Start the car, then start slowly sucking the solution into the engine. Don't go too fast or the engine could lockup. As soon as the solution is gone, stop the motor for >4 hours, but preferably 12 hours. Be aware that when the engine is restarted, there will be a LOT of smoke!

The oil-sucking can be prevented by installing a catch can. AMW and Greddy make catch cans, but a homebuilt catch can may be built using a Campbell-Hausfield air tool oil separator from most tool stores, including AutoZone. The AMW and Greddy cans are ~\$100, but look great. The CH can is \$15-25 for all the parts, and you can see how much oil is in it.

OVERHEATING & BURNING SMELLS

Even though the engine can heat up to 220, even 240 degrees Fahrenheit, this is normal. The radiator will keep the engine cool enough unless the radiator is blocked. Reprogramming the PCM can allow the fans to turn on earlier. If the fans also cool an aftermarket oil cooler, make sure the oil occasionally gets to 220 degrees to allow condensation and fuel to evaporate away. Fan settings and oil thermostats are two different ways to do this.

It's not uncommon for plastic bags to get sucked up under the front bumper, and cover the radiator, thus causing the car to truly overheat. If this happens, take a quick peek under the bumper, and remove anything under there. Sometimes bags get stuck to the exhaust pipes too, causing quite a stench as they burn away.

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ROCKER FAILURE

The needle bearings in the OEM rockers have been known to fail. Usually the problem is noticed with extra valvetrain noise and needle bearings stuck to a magnetic oil plug. Nasty Performance will rebuild OEM rockers with Harland Sharp bearings. This seems to be one of the better solutions since the stock rocker is very good at high rpms. Most aftermarket rockers are nose heavy and require grinding the heads and valve covers to fit. Currently Harland Sharp rockers are having problems with c-clip retainers falling off and causing problems on the way. I'll be following this issue since I have a set of HS rockers on my shelf waiting for this issue to be resolved. Here are some links:

LS1Tech - EMERGENCY!! ROCKERS! Help ASAP!

LS1Tech - Harland Sharp Rocker Failure

LS1Tech - Install or not install HS rockers?

ROOF NOISES

If you buy a coupe with a removable roof, you can expect wind noise and some creaking. The wind noise will never totally go away, but if there's creaking, you can eliminate that by thinly applying dielectric silicone grease to the weather-stripping. It also prevents cracking, so do this to all weather-stripping, on any car.

SCRAPED FRONT ENDS AND ROCKER PANELS

Checking for scrapes is an easy way to tell if the car was treated well. It's almost impossible not to scrape the front end, but there are two metal crash bar loops that should prevent the bumper from scraping. The bumper itself should not have scrape marks on it. Check the underside of the tip of the bumper, and the bottom corners of the bumper. If the crash bar gets scraped enough, eventually it will wear down to the point where it needs to get replaced. It costs about \$220 for the crash bar, nut-serts, bolts and insulators, and can be replaced in a couple of hours, just be sure to hook the hoses and electric connector back to the A.I.R. pump. Here's a list of ALL the parts you'll need to replace the impact bar and the side air deflectors:

Part #-----Qty---Description

10188023---001---Insulator (goes to bottom of radiator)

10278679---001---Insulator (goes to bottom of radiator)

10278679---005---Nut

10400765---001---Plate (the actual impact bar, unpainted)

10419312---001---Panel (air deflector)

10419313---001---Panel (air deflector)

11515638---010---Nut-speci

11515757---010---Bolt-Metr

10281487---010---Nut

Not all of these parts need to get replaced, and there will be a few leftovers, but it will get the job done.

The rocker panels tend to get scraped on lifts and big speed bumps.

A & A Corvettes invented two products to prevent damage from both kinds of scraping. They have wheels that attach to the crash bar, allowing the car to roll on driveways instead of wearing down the crash bar. It will still scrape the spoiler, but the spoiler is a cheap wear item that takes only 2 minutes to replace without a lift or jack. They also make two aluminum strips that attached the frame next to the rocker panels, and they take the scrapes themselves instead of the rockers panels. Neither of the devices are visible unless looking under the car, and they are discreet enough to possibly be missed anyway. If you see these devices installed, you can be pretty sure the owner took good care of the car. Without this extra protection, you can expect to replace the crash bar and repair the rockers several times over the life of the car. **WARNING:** It won't stop all scraping damage, just reduce the possibility of it happening, and reduce the damage when it does happen. Low hanging headers will probably still scrape.

SEAT CHOICE

Get the sport seats. The sport seats have a hole under the headrest. Some people put racing harness belts thru those loops. The seat frames and foam in both seats are interchangeable. Harness belt holes can be installed using Ford harness cutouts. Ask the dealership for them, they should know what it is without a part #. The foam in a standard seat will need to be cut, and sewing will have to be done, but it's an easy job.

SEATS

Corvette seats are delicate.

Sliding hard across the bolster can break it, causing it to flap side-to-side.

The leather is cheap, and there's little protection for it. It will wear out and form cracks, which is normal...for cheap leather.

The wire springs in the seat bottom, and the bars in the bolsters can also wear thru the foam and leather, but that can be fixed by placing layer of burlap between the springs and the foam.

Check the black plastic surround on the bottom of the seat to make sure it fits snugly against the leather, and isn't cracked. Older style plastic surrounds had a tendency to separate from the seat, but could be pushed back in. The newer style plastic surrounds can be used as a direct replacement, but one of the plastic studs may need to be ground off, or a hole will need to get punched into the leather.

The seats tend to rock back and forth by about a 1/4" during acceleration and braking. It can be fixed, but GM will not fix it. Some lucky owners can get the dealer to replace the frame under warranty. The seat backs swinging forward under braking is normal, and not considered a problem.

Here are a couple fixes:

Corvettemechanic.com --- must be a member

Rocking Seat Fix

SHAKY BRAKING

The front brake rotors warp easily under heavy braking...or at least that's what uneducated drivers think. I tend to believe StopTech:

http://www.stoptech.com/whitepapers...rotors_myth.htm

I verified this by lightly grinding my rotors with steel wool. Garnet paper is recommended, but I haven't tried it.

If you insist the problem is warping, don't turn the rotors since thinner rotors warp more easily. Resurfacing the rotors is only a temporary fix, one that is less effective each time your resurface

the rotors due to the reduced thermal capacity of the rotors. Rotors are available for \$25 at Napa and RockAuto.

SQUEAKY STEERING WHEEL

When you turn the steering wheel, you may hear a squeak. It's just the plastic surfaces rubbing against each other. A shot of lubricant fixes this.

SQUEAKY/ CHIRPING/ GRINDING WHEEL BEARINGS

Drive slowly, better yet, coast along at low speeds with the windows open in a quiet location. Listen for a squeak from the wheels. Try turning in different directions. If you hear the rear wheels squeaking, you may have a worn wheel bearing. A replacement bearing costs \$600 list, but you can usually find it for \$400-450. I've heard that AutoZone has a better replacement for \$126 by a company named Timken. The part is easy to replace if you can separate the ball joints. I had to buy a special Kent-Moore tool to do mine. This problem may persist safely for a few months, but eventually will become annoying. It seems to be a common problem, and more so for the rear wheel bearing. I've never heard of it happening twice to the same car, so if you fix it once, you're probably good for life. Several racers replace their wheel bearing every year.

A broken emergency drum clip may cause a false diagnosis. Be careful when removing & replacing the rear rotors.

STICKY HATCH

During cold weather, the hatch may pop up slowly, or not at all. Spray the latches with silicone grease until they come up properly. If the struts do not hold up the hatch, try lubing the strut bars.

1997: Service Bulletin: Hatch Will Not Pop Up When Activated in Cold Weather

SUSPENSION SQUEAKING

In cold weather you may hear the suspension creak when you go over speed bumps. To fix this, clean (optional) and lubricate the sway bar bushings. The adjustable metal sway bar end links on Hotchkis and T1 bars can also create loud clicking sounds. Most adjustable end links are quiet initially, but wear out and get noisy over time. Greasing and protecting the end links from dirt may prevent wear.

TIRE HOP

Tire hop during hard acceleration in cold weather is common, even if the same tires don't hop in warmer weather. Tire rubber when viewed thru a microscope looks like a web. Normally parts of this web grabs onto objects on the ground and stretch until either the car moves forward, or the web breaks, resulting in tire spin. I believe in cold weather, the web is too stiff for either of these events to occur, so the tires hop. To find out more, read *Racing & High Performance Tire: Using Tires to Tune for Grip and Balance*. I haven't read it, but if you do, please let me know if my guess is correct. I found a couple stories on Google about people curing wheel hop with stiffer bushings and/or (jounce) shocks.

TOUGH SHIFTING

The shifter in manually shifted Corvette's takes a strong arm to get it into gear. You really have to make sure that the shifter is fully in 1st and Reverse, or it will pop out of gear when you let the clutch out. This is not the fault of the car, but rather the fault of the driver.

Manual transmissions -- Replacing the transmission fluid often helps shifting. Early transmissions have paper blocker ring that require Dexron III compatible (usually organic) fluid because some synthetics will destroy the paper blocker rings and subsequently the transmission. Later transmissions, and all rebuilt transmissions, have Kevlar/carbon fiber parts that allow the use of synthetic fluids. I believe the 98-00 transmissions have the paper blocker rings. The safe transmission fluids seem to be: GM Synchronesh PN #12345349, Honda ATF-Z1, Royal Purple Synchronmax, Amsoil ATF, O'Reilly Dexron III ATF. The following transmission fluids may be unsafe for early transmissions: Redline D4 ATF, Mobil 1 ATF, Royal Purple Max ATF.

Related threads:

LS1.com - Ending the speculation: Blocker rings, who's had them fail?

LS1Tech.com - Ending the speculation: Blocker rings, who's had them fail?

Mobil 1 Synthetic ATF for a M6?

If it is especially tough to shift into 2nd or 4th gear, it's possible that the synchro's are worn out or the forks are bent. Do NOT force it into gear. Abuse creates and aggravates this problem. You can still drive, even quite well, without synchro's....or a clutch for that matter if you know how to rev match.

Some aftermarket shifters make it easier to make sure you're fully in gear, and prevent gear grinding, but they also vibrate, and require more effort to shift. The stock shifter has a tuned weight damper that changes the vibrations to a non-audible frequency. The shaking doesn't annoy some people, and there are some fixes.

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Here's where all the grounds are: [Go!](#)

SPARK PLUGS

The OEM platinum plugs, along with other plugs have had problems with the pucks falling off. I have a picture of missing pucks in this thread. This thread outlines some of the problems with using platinum, and a recommendation for using silver tipped plugs. Basically, of all spark plug tips, platinum is the worst conductor, copper is good, iridium is even better and silver is the best. Don't take my word for it, do a little research, starting with this review. As for longevity, platinum, iridium and silver do have an advantage over copper, but plugs foul up after ~10K negating any difference corrosion would cause, and no plug will run well after 100K miles.

To make the spark plugs easier to change, get the Snap-On double-swivel sparkplug tool and remove the coil packs. Here's all you need to know about sparkplug changes: Go!

WATER INTRUSION

Water leaks have several ways of getting in the car, and none of them AFAIK are very difficult to fix. Proper adjustments and maintenance will prevent most leaks.

Bill Curlee's thread about locating & cleaning the udders, and sealing the door hinges.

Here's a few TSB's from the CorvetteActionCenter.com:

1997-1998: Service Bulletin: Waterleak Above Door Glass (Reseal Blowout Clip)

1997-2002: Service Bulletin: General Waterleak Guide

1997: Service Bulletin: Water Drips into Rear Compartment After Hatch/Glass Has Been Opened

These problems, and many others, are addressed at:

www.corvetteactioncenter.com in the Tech Center -> Knowledge Base.

While these problems do sound numerous and severe, just remember that JD Power considers this a very reliable car. If you buy a Corvette, consider yourself fortunate that there are many resources available to help you locate and correct problems.



- The little yellow “helper light” on the bottom of the rear-view mirror that illuminates the shifter area.
- That you can put your key in the driver’s door and turn it twice towards the front to unlock the passenger door and a third time to pop the trunk.
- That you can pop the trunk and also pop the gas cap cover by pulling on metal lines hidden in the back.
- The little slotted cover on the dash behind the steering wheel is where the inside air temperature sensor is located.
- All of the option codes are in the glove box.
- Tire inflation recommended pressures are on the driver’s door.
- The thing that looks like a little LED near the DIC buttons is a light sensor.
- The thing that looks like a little LED near the defroster vent is a UV sensor for determining A/C usage to compensate for the heating effect of the sun.
- The build sheet is in the front re-bar.
- If you leave your turn signal on, in about 1 minute it will start to ding (loud enough to hear over the stereo) to let you know you have old timers disease.
- You can reset the oil life by pumping the gas pedal 3 times (but not with the engine running).
- Hold down the reset button while on one of the trip odometers and it changes that reading to the miles you’ve traveled since last starting the engine.
- Hold down the Active Handling button for 5 sec. to engage “Competitive Driving” on cars equipped with active handling (2000 and previous years must be stopped.)
- If you pull the seatbelts all the way out while you’re buckled in, they ratchet back in to hold you tighter into the seat. (then move the seat forward to make it extra snug -- Lefty)
- Simply remove fuse #2 under the hood and your DRLs will be out permanently. Only thing affected is that when you unlock at night using the key fob your front turn signal lights and back up lights will not flash. Your front turn signals will operate normally, however.
- The side-view mirrors can twist both forward and backward, decreasing the chance of damage if struck.
- There is a release opening with a flap to let air out of the car when the hatch is closed. It is located just above the driver side rear compartment behind the carpet and on the side of the car. Not that it really works well.
- Also you can ground your amp to a screw/bolt that holds the rear middle compartment to the frame.
- If you have a 6-speed car you can pop the trunk when the car is running by lifting the e-brake.
- There is a spot on the driver side just out of the middle compartment under the carpet for the lug nut key. You should have a compartment on the drivers & passenger’s side (in the trunk) and a center compartment. On the left (drivers) side of the center compartment, on the left side where the center cover fits, there is an ‘indent’ that holds the wheel lock key.

- If you turn on the headlights, then go to parking light position, the lamps remain up but the headlights are not left on.
- If you have the passive entry feature: If you lock the keys in the car, wait a few minutes and then shake the car. That will unlock the car.
- HUD has a shift light for the manuals.
- You can easily shift the M6 trans up or down without the clutch if you match revs. (Not great for longevity, however.)
- You can eject the cd from the in-dash player without turning on any power. Don't even need key in the ignition.
- The cruise will disengage if you purposely make sharp side to side turns while cruising at say 60-80 mph.
- When the engine is shut off, you can get the odometer reading by turning on the parking lights.
- You can program setting #3 (both memory buttons at once) in the seat memory to run the seat back and steering wheel forward for getting in/out of the car with the engine running.
- If you hate DRLs you can pull the e-brake ONE click and they go off.

C5 POWER TIPS

First you need to know how your car is doing. A trip to the dyno can give you quick answers.

Tuning software can diagnose and tune your car. LS1Tech and HPTuners are two popular tuning packages. At some point in the future, both packages will be able to do scanning with incorporated wideband sensor support. At this time, December 2004, only HPTuners can do both.

POPULAR UPGRADES:

Cold air intakes: Vararam, Halltech, Blackwing, zip-tie

Intake manifolds: LS6, LS2, LSX, Wiend, sheetmetal

Cat-back exhausts: B&B, Borla, Z06 Ti, Corsa

Long tube headers: LG, Kooks, TPIS, Stainless Works, Breathless, Jet-Hot, GHL, QTP

Superchargers: ATI (go to A&A), Vortech, Magnacharger

Turbochargers

Stroke & bore

Head & cam packages: TEA, AFR, TSP, Patriot, Cartek

Tires: Kumho Ecsta MX, Nitto Extreme RII

QUOTE:

The convertible and coupe (it's really a targa) come with run-flat tires, with 17" wheels in the front, and 18" in the rear, with tire pressure sensors. The Z06 comes with non run-flat tire, but has a tire repair kit. Switching from run-flat tires to regular tires typically allows the C5 to ride softer, accelerate faster, and corner harder, but if you use the tire repair kit (goo) on wheels with the unobtainium tire pressure sensors, you'll destroy the sensors. No C5 has a spare tire. The best way to improve the handling of any car is usually thru the tires.

Aerodynamics, gearing and top speed

The hardtops and Z06 have shorter rear windows, are less aerodynamic, noisier, and weigh less than the standard C5 coupe like mine. Even though the Z06 has more hp than standard C5's, they have a lower top speed than manual Z51 C5 coupes. This is due to both aerodynamics and gearing. All C5's top out at redline in 5th gear, so a taller 5th gear, or much shorter 6th gear, or taller redline is required to go faster. All else being equal, a Z51 coupe will still go faster than a Z06. Above 190 mph, air builds up under the front of the car. This can be solved with a vented hood like the ACP C5-R or MCM hoods.

WEIGHT REDUCTION

You can achieve substantial weight reduction with the following modifications, while still having a car that's very comfortable to drive. Most of these modifications will directly increase (and decrease in a few cases) the safety of the car, while safety is indirectly improved due to the better handling and limits of a lighter car. Fighter pilots say "speed is life". Acceleration,

deceleration, and lateral acceleration are all forms of acceleration, and lighter cars accelerate better in each of these ways because the tires have less mass to control....thus a lighter car is a safer car. Lighter cars have better moments of inertia which allows them to turn in more easily and roll less. Lighter cars are also easier on the tires and gas.

All the stage weight estimates are typically wild butt guesses, but it makes it easy to see what is possible. The weight listings in the separate weight posting is MUCH more reliable.

STAGE I: STREETABLE WEIGHT REDUCTION MODS

- Non-popup headlights (~40 lbs)
- Braking rotors with an aluminum hat, or titanium rotors (unproven on street cars) (~20-30 lbs)
- Carbon fiber hood (~12 lbs)
- Z06 (thinner) windshield and side windows (~5.7 lbs)
- Non runflat tires (~20 lbs)
- Slicks (~30 lbs)
- Z06 wheels (~4 lbs est.)
- Corsa titanium exhaust (~35 lbs)
- Long tube headers (~20 lbs)
- Halltech aluminum alternator & bracket (10 lbs)
- Carbon fiber driveshaft (~2 lbs)
- Newer torque tube
- Less options [HUD, elec AC, Active Stability, seat/mirror/steering wheel memory, cd changer] (~50 lbs)
- Less gasoline & wiper fluid (No wiper fluid=9lbs, 6 lbs for every gallon of gas in that 18 gallon tank....~81 lbs for autocrossing)
- Remove cargo net
- targa top (~20 lbs)
- BCM's
- C5 "appearance mods" - exhaust plates, doorsill covers, etc.
- fuel rail covers
- all loose change, CD's, golf clubs, misc. items, from center console, hatch area, and glove box
- Replace stock crank pulley with aluminum aftermarket pulley,
- steel dampener with aluminum dampener
- stock targa top with lexan piece (coupes)
- water pump with electric water pump
- battery with smaller battery

- non-stressed fasteners with aluminum or titanium fasteners
- leaf springs with coil over shocks with titanium springs
- steel shifter with aluminum shifter and delrin or titanium shift knob
- Empty your pockets of extra change, PDA's, cell phones, keys, lead plates, or whatever other junk you lug around
- Go on a diet

STAGE II: hardcore SEMI-STREETABLE WEIGHT REDUCTION MODS

- Aluminum flywheel (~10 lbs)
- Lighter clutch like Exedy or Quartermaster (~10 lbs)
- Racing buckets (40-50 lbs)
- Off-road x-pipe (10 lbs)
- Replace stock hood, fenders, doors, roof, hatch and bumpers with aftermarket carbon fiber pieces
- Remove Tire repair kit (Z06)
- Floor mats
- Fog lights

STAGE III: TRACK ONLY WEIGHT REDUCTION MODS

- Racing steering wheel & delete both airbags (~30 lbs, but get a 4-6 point harness)
- Use unpadded aluminum or carbon fiber steering wheel
- Run open headers
- Replace stock front and rear glass with polycarbonate "glass"
- Rebuild motor with Al or Ti connecting rods, Ti valve spring retainers and pushrods
- Port the heads
- Replace valve covers with magnesium or carbon fiber parts
- Strip entire car, acid wash chassis, put car back together.
- Remove Column locking hardware
- Interior – passenger seat, carpets, speaker panels, head liner, dash, center console, glove box, door panels, sun visors, rear view mirror, insulation, etc.
- A/C Compressor
- A/C controls and ducting
- AIR pump system
- Factory radio, speakers, and/or CD changer, and unnecessary wiring
- HUD projector
- Windshield wiper fluid reservoir and pump
- Windshield wipers and motors
- Stock cat back
- Power steering pump

- Front sway bar (drag only)
- ABS, TC, AH hardware and sensors (drag only)
- Fender wells
- Headlight assembly, turn signals, taillights and reflectors
- Shave side mirrors
- Torque tunnel cover
- OEM seat belts
- Parking brake
- Side windows and motors
- Power locks and power windows
- Side impact beams
- Casting flash from engine, then polish

REDUCING UNSPRUNG WEIGHT—NOT ALL IS STREETABLE

- Forged 1-piece wheels
- Use 3-piece wheels by Jongbloed, Kodiak, CCW, BBS
- Skinny front wheels (drag only)
- Ti fasteners on 3-piece wheels (~1 lbs per wheel)
- Lighter non-runflat tires, or even track only synthetic corded slicks
- Lighter calipers
- 2-piece, unvented or titanium rotors
- Titanium wheel studs
- Aluminum or titanium lug nuts
- Remove tire pressure sensors
- Remove rubber valve stem cap
- Balance the wheels without tires or balancing weights, and then mount tires

GREAT LITERATURE FOR hardcore TECHIES

- Helm's Service Manual --- this should come with every Corvette IMHO
- Key Design Developments of the 1997 Chevrolet Corvette (SAE SP-1282)
- GM eSI Techline Service Manual
- Nuts, Bolts and Fasteners and Plumbing Handbook, Carroll Smith
- Drive to Win, Carroll Smith: The Essential Guide to Race Driving
- Engineer to Win: The Essential Guide to Racing Car Materials Technology or How to Build Winners Which Don't Break, Carroll Smith
- Tune to Win, Carroll Smith
- Fiberglass & Composite Materials: An Enthusiast's Guide to High Performance Non-Metallic Materials for Automotive Racing and Marine Use
- How to Make Your Car Handle, Fred Puhn

- Race Car Vehicle Dynamics (SAE R146)
- Racing & High Performance Tire: Using Tires to Tune for Grip and Balance (SAE R351)
- Physics of Racing

For even more tips, go to:

<http://www.corvetteforum.com/forums/c5-tech/984927-weights-measurements-ratios-strengths-etc.html>