

Buyers Guide and Checklist

Tools needed: *Flash light, mirror and pen.*

Caution: This is only a guide and does not constitute a vehicle inspection by a trained professional. We always recommend a vehicle be inspected by a professional technician and we do not warranty any omission on our behalf. Follow this guide at your own risk!

Exterior

Yes No Body

- Are seams where doors and fenders meet even and straight? Gaps on C5's are not that tight!
- Are seams where the hood and trunk meet the fenders even and straight?
- Check lower rocker panels for damage. Road facing and jacking areas are major spots to look! Are there any holes or broken fiberglass?
- Check front air dam and radiator support. Any dents or scratches?
- Check fenders for rock chips. Any chips?
- Are all body panels the same color?
- Has the car been recently repainted? (Look for signs of spray paint on moldings; also check the edges of the doors, hood, and trunk to be sure they are all the same color. Fresh paint may be a sign of an accident. Tape lines are dead giveaways!
- Check all lights. Do the retractable headlights go up and down smoothly? It's common for the gears to go bad in the headlights.
- Check exhaust system mufflers for road hazard damage. Any dents or holes?
- Inspect rear bumper tube welds at end of frame. Any fresh paint or inconsistent welds?
- Inspect the differential output seals at the axle shafts. Another problem area. A little oil & dirt is ok, visible oil is not!
- Any signs of oil or fuel leakage?
- Inspect side mirrors for swivel operation. Common failure area. Do they swivel fwd and aft?
- Inspect front and rear brake pads and rotors. Pay close attention to the gap between the rotor surface and the pad base. This is an indicator of good pad life if it's over 3/8 of an inch. Are pads adequate and rotor surfaces without heavy grooving? Semi-metallic brake pads are hard on rotors.
- Inspect windshield for chips or cracks. Is the window free of damage?

Findings _____

Yes No Tires

- Do all tires have the same amount of tread? A little outer shoulder wear can be normal for a Corvette since it is made to go around corners.
- Are they Runflat tires? Z06 did not come with these from the factory but should have an inflator repair kit. Non Runflats are ok, just have a mini air pump and tire plug kit handy.
- Are front and rear tires the same size side to side? (Check tire size markings on tire sidewalls.)
- Are all tires the same brand?
- If the vehicle has locking lug nuts, is there a key for removing them?

Findings _____

Yes No Suspension

- Does the vehicle sit level?
- Bounce each corner of the vehicle. Do all corners respond the same? (Corners should only bounce once or twice before stopping.)
- Do you hear a creaking noise when bouncing the vehicle's corners?

Findings _____

Yes No Frame

- Examine inside trunk under carpets, wheel wells and under the hood. Do you see areas that look like they have been crumpled and straightened or different looking fiberglass?
- Look underneath each side of the vehicle for scratches, fresh paint or being recently cleaned. (If so, suspect the frame has been straightened or repaired after a crash.)

Is the VIN number present on the front bumper? Open the hood and look below the hood line at the front of the hood. You should see the VIN. If not the front bumper tube has been replaced from an accident!

Gas Cap and Filler Neck

Is there a gas cap? Does it fit correctly? Release is in the center consol.

Remove the gas cap and check inside the filler neck for damage or missing parts.

Findings _____

Interior

Yes No

Is the upholstery in good condition? (Look for tears, stains and burns.)

Do the seats have side bolster wear?

Do the seats stay firmly in place without any FWD and AFT movement?

Is the dashboard and headliner in good condition?

Do seats adjust easily?

Are any window seals, door locks, handles, dash controls or similar items missing or torn?

Open the top or remove the roof panel and inspect the seals. Wear from usage can cause leaks and are expensive to replace.

Does the roof panel have lines running in the glass like spider webs (crazing)?

Do all interior lights and dash bulbs work?

Does the HVAC controls work for all vents and locations (see common problems if not!)

Does the HVAC panel display work and all backlighting operative?

Does carpet condition match the age of the vehicle?

Does carpeting smell of mildew or stale water, suggesting moisture underneath (or worse, flood damage)? Some C5's had an issue with water seepage in the passenger footwell area.

Check under the dash at the top of the carpet. Are there stains suggesting heater core or air conditioner leakage (passenger side?)

Use the DTC Retrieval Procedure to check for chassis and engine codes. Are any present?

Do all controls work? Some cars may have telescopic steering wheels so make sure and check that!

Start the engine; do all the gauges work? If it has a Heads Up Display turn it on and check all the pages. The controls are in the 10 o'clock position near the steering wheel.

When starting the car did the starter sound clear and smooth? Was it hard to start? C5's are NOT hard starters!

Findings _____

Start the A/C-you should hear the clutch engage in less than 3 seconds and get an idle bump. Did you hear it and feel cold air from the vents? Rule of thumb: the air should be at least 15 degrees colder than ambient.

Turn up the radio and listen to the Bose system on each channel front and rear. Are all speakers clear or equal? Back speakers can be ruined when the hatch is opened in wet weather as the water runs down the hatch and into the rear compartment and on to the speakers.

Inspect the condition of the hatch seal. Any tears or dry rotting?

Are there 2 Key FOB's? Do they both work?

Is the owner's manual present in the glove box?

Findings _____

Road Test

Some tips before you drive: A C5 Corvette is unlike any car you have probably driven before. Driveway approach angles can be a real hazard for the car. Speed bumps, parking curbs and items in the road add extra work load to new Corvette Pilots. The driver position can feel like sitting in the back seat of a 4 door car. Take care when you park and stop before the curb disappears from sight. While you're driving, try to avoid pot holes, road kill and any object large enough to be visible. It does make you a little nervous but it adds to the prestige of owning such a race derived sports car. Don't worry it becomes second nature over time.

Pro Tip! If you have a steep driveway, make sure your potential new car can make it into its new home! Before you buy have a friend come with his C5 or take your test ride home!

Yes No

- Drive the car on a course of varying speeds and corners. First test: Is the idle good?
- Does it accelerate smoothly? Power delivery is pretty consistent in the C5 with torque pretty early in the power band.
- Does it shift and hold gears well?
- Does the CAGS (Computer Aided Gear Selection work?) Don't worry, you can disable if you don't like it!
- Specific to automatic transmissions: does third gear hold without slipping under full power?
- Manual transmission cars: are all gear changes normal?
- A great test: Find a large clear parking lot and at very slow speeds (less than 1 mph) turn the front wheel in full lock positions and listen for noises and proper steering wheel movement. Noises in the rear can be the rear differential and could require investigation!
- Check the car in reverse. Smooth operation? Hear any noises?
- Clutch test. Come to a stop and start in 3rd gear. You should be able to start without the clutch slipping. It may stall if you don't feather the clutch just don't burn the clutch! This is one weak area especially on Z06's. Repeat at least twice. Was it consistent both times?
- Is it easy to get into gear? Some manual transmissions have clutch cylinder and actuator problems difficulty could show this as a sign of a bad actuator.
- Inspect clutch fluid on 6 speed manual cars. This single item can be used to determine how the car was taken care of and used. Best of all, its the smoking gun of how hard its been driven. Hard acceleration and power shifting cause lots of friction in the clutch. This friction causes clutch dust to be forced into the clutch throw out actuator around the seals and into the fluid. Failure to change the fluid frequently will cause failure of the actuator causing clutch pedals that go to the floor or don't come back up.
- Any abnormal squeaks or rattles? A pop from the roof panel from twisting the car while turning onto a steep driveway is common and even normal. This is why we recommend the tunnel reinforcement plate to limit the noise from flexing.
- Does it drive straight? A slight pull to the right is normal alignment. Make sure your on straight level road first! We still recommend an alignment be done before or after purchase to save the tires.
- If equipped with selective ride control, operate the different ride control functions. The changes are very slight so it may take some time to notice the difference. Bumps are the best indicators. Are they working?
- Engage the cruise control. Did it tell you the speed? Does the coast and resume functions work?
- Are there any codes in the driver information center? Don't accept any tire faults as this can be an indicator of failed or missing sensors. Each sensor can be \$80-\$120 each so don't expect the "they just need reprogrammed" excuse. It's the law for dealers to sell cars with fully functioning safety equipment. Private sellers may try to plead ignorance!

Check brakes for warping. Apply the brakes moderately; do you feel any pulsing in the brake pedal or shaking in the steering wheel?

Return to origin and check parking brake operation. Does the "E" brake handle move up and down and lock in place? The "E" Brake is a small drum brake inside the rear rotors and operated by cables.

Leave the engine running and open the hood. Do you see any oil leaks or vapors or hear odd engine

noises?

___ ___ Turn off engine and let it cool for 3 minutes. Check engine oil level. New oil will have an amber color. Was the oil amber colored and serviced properly? If not, this may show signs of neglect and lack of service may carry over to other areas of the car.

Findings_____

Service History

We recommend using an auto service history provider. Our favorites are Carfax and Auto Check. Both have strengths and weaknesses. They have not paid us a dime to mention their names it's just cheap insurance! If the car is currently at a GM dealer ask for the service records. If it's not at a GM dealer, take the VIN number to a GM dealer and see if you can get a service print out. These should be more current than Carfax. Compare history for trends that may lead to lemon law problems. Auto Check is great for body work and that type of history. They can help you decide if the car was or was not involved in any accident major or minor. For help with this and other things please visit our site so we can help! It's what we are here for!

If you cannot physically see the car to inspect it we recommend a 3rd party inspector. Just do a search on the internet for 3rd party vehicle inspection. Pick the service that fits your situation and requirements best.

C5 Corvette Winterizing

WASH YOUR VETTE: If your Corvette is going to sit for months without activity, the car should be washed to protect against any environmental damage like tree sap, dead bugs etc. Some of the environmental damage may be acidic and damage the paint or clear coat permanently. One of the best products we have found is the clay bar. There are several brands but we believe they all work just as good as the next. The Caly bar uses a lubricant and special clay to remove oxidation dirt. The results have to be seen to be believed! Have you ever waxed your car, felt it, and discovered it still was not smooth? Contaminants on the paint are the reason for this, especially if you have semi-metallic brake pads. The brake dust has metallic particles that come off at high temperatures from your brakes or others around you and adhere to your paint. Tar, bugs and dirt can ruin the feel of your paint also. Once you utilize the clay bar treatment, we highly recommend a good wax! If you need help with recommended products check our site here: <http://www.corvette-web-central.com/CorvetteWax.html>.

TIRES & WHEELS: Clean the tires to remove any built up oxidation. Clean your wheels to remove dirt and brake dust. When brake dust is left on wheels for extended periods it can permanently damage the wheel surface. Remember to use a clear coat specific cleaner if your wheels are clear coated. For tires, don't worry about flat spotting. It does not hurt to park on small pieces of carpet or better yet tire cradles. This will help protect the rubber and the floor. It's a good idea to keep your tires inflated to the correct pressure.

INTERIOR: To prevent moisture buildup and possible mold formation, use a desiccant in the foot wells and rear cargo areas. DampRid is a popular choice and it is available at major retailers like WalMart.

FUEL TANK: The fuel tank should be filled to the top with winter fuel (available after October 1) along with a fuel stabilizer. The reason to top off the tank is to decrease the amount of air space so condensation can't build in this area, thus preventing damage to your fuel system and moisture build up.

BATTERY: The battery should be kept charged the entire duration your Corvette is stored, whether it's winter or summer. If left out in the cold at a state of low charge you will most likely ruin the battery. Get yourself a good trickle charger that protects from overcharging the battery. Don't go cheap!

FLUIDS: Make sure to top off all fluids including coolant, brake fluid, clutch and transmission, oil and fuel. Always change your oil and filter before placing a car in long-term storage as well. The reason for this is to protect your vital engine parts. The combustion process creates acids and moisture can be present from a previous drive if you didn't raise the oil temp high enough.

CAR COVERS: Indoors or outdoors, we recommend covering a car when it will be stored for more than a few months. The type of cover you select should be based on

where the car will be stored. A weatherproof cover is a solid choice for indoors or outdoors. A cotton cover will suffice for indoor-only storage. Make sure and clean or shake your cover before installation.

STARTING THE CAR IN WINTER: We recommend starting your Corvette once a month. Do this throughout the winter if possible. Just set a first day of the month reminder so you won't forget! This will help circulate the oil rather than letting it sit in the oil pan all winter, exposing cylinder walls and moving parts to possible corrosion. A better option involves taking it around the block! Just don't forget your little notes for mothballs and tire pressure. You will need to correct anything that is not road worthy! This beats fogging the cylinder walls by taking the plugs out and adding oil. This way has many advantages like not breaking off a spark plug! **Warning! *Running your car in a garage is very dangerous so don't do it without proper ventilation!***

RODENTS: Can wreak havoc on a Corvette, particularly the plug wires. Certain brands of plug wires (including GM) consist of a vegetable based outer shell which is very attractive to anything with a nose. To fix this, place mothballs in the engine area. Place another note on the Driver's seat. Regarding tail pipes, place towels over each and wrap rubber bands around them.

See next two pages for the checklist!

C5 Winter Storage Checklist (Short Term)

Return to Service Items

___ CLEAN CAR: No matter where you store the car for the winter, before you put it away it should be cleaned, waxed and most definitely thoroughly dried. Not doing so long term could cause issues with moisture. Even though there's a slim chance with a C5, it's still a good practice with fiberglass cars. Wipe down and vacuum the inside and treat soft items with a product designed for leather seats and dashboards.

___ TREAT SEALS: After cleaning, treat all rubber seals around windows, doors and tops with Wurth Rubber Care Gel Stick or a similar agent to prevent cracking and aging.

___ LUBRICATE: Lubricate all hinges on doors, hoods, etc.

___ FILL GAS TANK: Before storing the car, fill up the tank completely with fuel. If you leave only a little gas, rust can form on the exposed steel fittings inside the tank.

___ FUEL ADDITIVE: You can prevent fuel from breaking down causing damage and varnish by adding fuel stabilizer to a full tank. **Pro Tip!** If you add this to your gas during your last fill up it will have a chance to run all the way to the injectors by the time you get home. Doing so will also ensure proper agitation of the fuel and additive.

___ CHANGE OIL: After running the car, drain the oil and refill it with fresh oil. You will need 7 (6.5) quarts of oil and an oil filter (filter change not required for storage). This will eliminate moisture and the acids of combustion. **Pro Tip!** While on the bottom side, check for leaks and such that you can address during the winter down time!

___ CIRCULATE OIL: With the new oil in, run the car briefly to let the new lubricant circulate.

___ BRAKE FLUID: Change the brake fluid. Even if the car doesn't need it desperately, you'll be preventing future problems by changing the fluid. Brake fluid attracts moisture so keeping it topped off and changing it annually will decrease the chance of problems in the future. This is your choice but we highly recommend changing at least the fluid in the reservoir. Changing the fluid every year will help keep a majority of it clean.

___ CHECK RADIATOR: Service to the correct level. Please check the owner's manual first!

___ **BATTERY:** *Unless you plan on starting it every month, disconnect just the positive lead. If not, disconnect both battery cables and remove the battery for storage inside, but not on a cement floor. You will find a dead battery in the spring if you store it on cement! Very low temperatures also destroy batteries. If you have a battery charger, trickle charge the battery periodically over the winter and just before you take the car out of storage. Trickle charging will not boil the battery acid and won't damage it. Do not leave a full charge charger on it for 4-5 months! You certainly won't have a good battery anymore, even if your house doesn't turn to ashes!*

___ **PLUG EXHAUST TIPS:** *Plug the exhaust tips with material that mice and other rodents won't chew through. Also place a little poison inside so rodents won't even think of getting in there. Make this easy to remove if you plan on starting the car every month!*

___ JACK STANDS: Storing the car on jack stands or blocks has its pros and cons. Pros: You can keep the tires off the floor and unload the suspension.

Cons: If you have a fire in your garage/storage place, you can't just drive or push it out.

The best compromise is to over inflate tires by about 10psi to prevent flat spotting. Remember to place a note in your seat for spring.

____ **BLOCK WHEELS:** Block the wheels in front and back to prevent rolling. Don't set the emergency brake, pads and shoes can stick to discs and drums.

____ **PLASTIC ON FLOOR:** When storing inside, lay down a large sheet of heavy-duty plastic or a tarp (greater than the car's length and width.) This will prevent rising moisture from the ground or cement and collecting on the underside of the car.

____ **CAR COVER:** There are many sources of car covers. Use one! If you do store your car outside, use only an external cover that breathes. Moisture must escape from the cars surface. A synthetic fabric cover is best. It should shed water, yet breathes, shielding from dirt and sun and will not mold or mildew.

____ **STORAGE LOCATION:** If you leave your car outside, pick a spot that will be shaded or as dark as possible. Sun can damage paint through a thin cover.

____ ***MOISTURE-ABSORBING PACK:*** *If the car is being stored indoors put a moisture-absorbing pack in the interior and trunk. DampRid and DRYPAC are good vendors that make these packs, which do not smell, swell or have any adverse effects on the vehicle. Make sure the windows and vents are closed for them to work.*

____ ***TRAY OF MOTHBALLS:*** *Put a tray of moth balls inside and under the car to remove any odors on the inside and will drive away any carpet loving rodents.*

____ ***SPRING LUBRICATION:*** *Doors, hood and hatch.*

____ ***CHECK SHEET:*** *Keep this check sheet and book with the car (fits in glovebox) while in storage so you will know what you have done to the car. When spring comes you can set it back to normal. We have everything in Bold Italic to help you in the spring!*