THE ULTIMATE PROJECT CAR GUIDE

MuscleCarFan.com

A Community for Muscle Car Enthusiasts

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Introduction

There may be no hobby more rewarding than owning, maintaining and driving a vintage automobile, particularly a powerful muscle car, although the pitfalls are many. Dealers without scruples are attracted to selling used cars because it is a profitable business, but this would be at the consumer's expense, so it is up to the buyer to be aware. You might well know that a collector car is likely to change your life, instead of going to the beach or a camping holiday you will be more likely to want to attend car meets, races or work on your vehicle, if not just drive it. This book is a compilation of a number of articles that are not only aimed at helping you find a vehicle that fills your needs, but also how to restore and maintain it without emptying your bank account in the process. A complete ground up restoration is a large undertaking you must be as well prepared for as possible to get the best results. The right tools are very important but a warm dry place for storage and working also need to be considered to complete your project. Even a person who

is well organized and has a plan in place before the work is started will reach road blocks such as parts that do not fit or are on back order. You could have more than one thing you are working on at the same time to help keep the restoration going ahead, rather than getting bogged down and have to wait for a part. This book was printed to help you avoid these pitfalls and other common mistakes a novice is likely to make.

The 58 Questions I Asked Before Buying a Classic Muscle Car (with Answers)

Why do I want to do this?

- Enjoyment
- Hobby that can last a lifetime
- Satisfaction in completion
- Meet others with the same interests

Why is it important to me?

• Owning a piece of history

• Expand your knowledge base

• Drive a classy and distinctive automobile

What will I do if I get stuck?

• Know this: if you have the resolve to own and drive a vintage muscle car, the means are out there for you to do just that. You

can find everything you need to keep you mobile and not always at a premium price. An enthusiast can do most of the maintenance at home.

• Find a support network. Car clubs have many highly skilled members whose main interest is to expand their hobby. Members with skills, knowledge, and equipment needed to bring a car back to original condition are active in clubs. Small business restorers, who are also motivated enthusiasts, will often provide more of their resources and skills for the classic car.

How do I find people who have already done it?

• See above, but also show & shine events, a drive by, and car swap meets are a few perfect places to find cars, parts, and folks who have been there and are willing to share with other fans.

How much is this going to cost me?

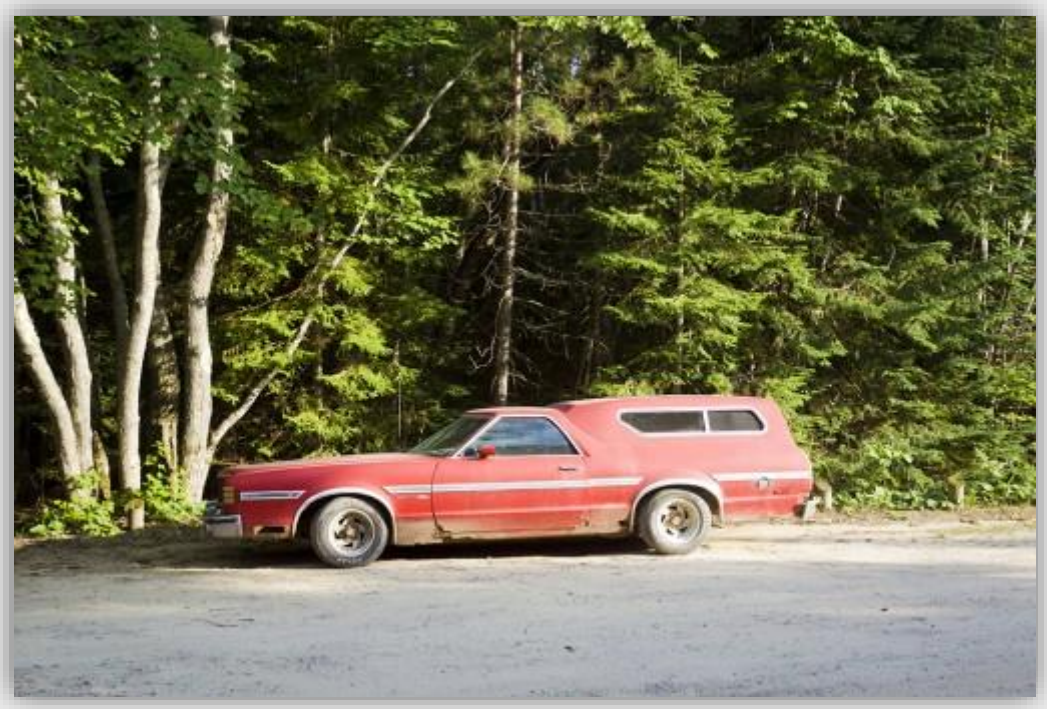
• A tough question to answer, but an astute MCF can drive around in a classic muscle car in fair condition or better for as little as $10,000, possibly far less. A more realistic figure might be as high as $20,000, but in this price range, you could find an example of almost any year or model from all manufacturers in moderately

good condition. There are also many bargains out there waiting for a new home for less than $5,000 if you take your time and/or look in the right place. A used car will carry a lower price tag than a collector classic car. So I would check the used car section first.

Which car should I buy?

• Research is the key. Know a vehicle model's track record and frequent the right circles to talk with other enthusiasts.

• Buy a vehicle you like and will happily own for the long term. Do not settle for less than that.



© Maxym022 | Dreamstime.com Ford Ranchero

What should I look for?

• Rust-free and serious accident-free

• You can easily search for a clear title to the vehicle without liens. This will also let you know whether it was stolen from another jurisdiction. The VIN is often recorded in two or more places. Make sure the visible ones all match.

How much should I pay?

• Fair market price.

What should I avoid?

• Rusty body and a vehicle with frame damage are poor candidates to restore.

Where should I look?

• Estate sales are often a good place to find a car.

• An informed buyer can always drive home a bargain if you're ready to act whether it's from someone's garage, an auction house or on an Internet site.

Who should I buy from?

• An estate sale might be the best place to find value. Other collectors and car club members are good places to look, particularly if you want an older restoration.

What should I do myself?

• Re and re all the mechanical is a good place to start your learning curve, but don’t try to do everything at the same time. Get your vehicle in working order so you can use it and get a feeling for the most important things to attempt first.

• All the menial tasks like taking the mechanisms out of the doors for painting and rebuilding

• Anyone can do bodywork, but a classic will need work beyond the standards of modern crash repair. I would find another enthusiast to do all the bodywork and paint. The owner should stay around and take a hand in the preparation for painting.

© Ryzhanov | Dreamstime.com Spares

What should a professional do?

• Anything you cannot do yourself. I would have a specialist do any fine-tuning.

How do I explain to the professionals what I want?

• The right person to do your work will explain the possibilities. I would accept those opinions or find another person to do the work.

How do I increase the value of the car?

• Keep the car in as good a condition as you can with regular maintenance. Proper storage and regular use will help keep a vehicle from deteriorating too quickly. The best plan is to drive and enjoy your car. Over time, the value will increase on any collector vehicle.

What improvements can I make?

• Insurance or any special licensing for collector cars in your jurisdiction may not accept any kind of moderation. Find out what the rules are where you license your vehicle before you make any changes. Changes you make on your classic should only be those you can easily remove without a trace. Avoid adding holes to the dash or aftermarket scoops or sunroofs to keep the vehicle's value.

What improvements should I make?

• You can't go far wrong if the vehicle is kept stock with no modifications at all. Safety is paramount and things like adding seat belts or upgrading to disc brakes may also be okay, but be certain to keep the old parts

Where do I get parts?

• Swap meets, car rallies, and other similar events are good places to frequent, and one day, you will see exactly what you need and in the right color. Joining a car club can put you right in the center of a network of individuals who will help find the part and know all the best places to look. Joining a car club will also put you in touch with like-minded people, who have a wealth of knowledge and skill to share and are always ready to accept a new member.

What if I can't find them?

• You will eventually find what you need, but furthermore, you will find a substitute or a way to make the original piece last a little longer, until you do. A padded dashboard with a vinyl covering in pristine condition is one item that’s very difficult to locate. A dash like this may be an even bigger challenge to duplicate, making innovation your best option. Mechanical parts can sometimes be made from scratch, but they can be very expensive to make, for an example, an iron casting that needs machining.

How much should I drive it?

• Drive the classic vehicle regularly to keep all systems lubricated. Gasoline can deteriorate in as little as two months. Put the muscle

car through its paces once in a while, as well. One or two short drives a week is adequate, and if you burn off a tank of fuel each month cruising around, the car will perform the way it should.

How should I store it?

• Keep a classic car under a roof; in some places a heated garage is a necessity for a vehicle with a large value. A cotton cover is a good thing to use anytime, but there are also “four season” covers available for heavy-duty protection. Long-term storage would involve a number of preventative measures such as removing the battery, lifting the tires off the ground, and draining the oil, all very basic precautions.

What happens if it sits idle for long periods?

• Long storage calls for preparation. Remove the tires and sit the vehicle on blocks; remove the fuel from the tank; remove the battery or disconnect it even for short periods. A battery cutoff device is also a great theft deterrent.

Where can I find shows to share it?

• Car clubs hold events regularly; new members and non-members alike can take part in most events.

• Events take place every weekend the weather cooperates.

Where can I learn about my car?

• The best teacher is hands-on experience. Working on your classic will teach you volumes.

What customizations are possible?

• You can modify as much as you like, but if resale value is important to you, then do not wander too far from the original, although there are exceptions.

What modifications are possible?

• A good rule of thumb is to not to make any permanent alterations or anything that leaves a mark or hole when removed. Some safety items like seat belts or disc brakes may be a good idea but keep all the original pieces just in case.

What if I want to change out the engine?

• Not difficult, just make certain you use one that you could have ordered with that model when new.

How do I make it sound like a muscle car?

• The exhaust system is the key to having a rumbling muscle car noise.

What can I inspect?

• All windows, doors, and gauges should work properly. Look for oil leaks. The engine should start easily whether a cold or warm start. Do a long test drive at all speeds in traffic and on the highway. Clunks, clanks, shimmy, vibration, and rattles are all signs of a pending problem. An automatic should shift gears without hesitation, and the clutch is slipping if the revs increase in a standard without the vehicles speed increasing, as well.

What should I have a professional inspect?

• As the purchase price drops, the need for an outside inspection also falls.

• An inspection by a competent mechanic could cost between $50 and $200 or so. If I'm paying more than $500 or so for a used vehicle, I would want to have a look at the undercarriage with the car on a hoist.

How do I transport it across long distances?

• Buy a trailer; one with a cover is best for an expensive unit, but a tow bar is a cheaper option.Both of these can attach to the back of any vehicle with enough torque to pull it; a modern six-cylinder engine would work fine. For a one-time tow, a commercial auto transport or train can do the job, but this is expensive. For across town, try a tow truck.

Why do sellers sell classic cars?

• Financial problems

• To make room for a better vehicle

• Profit-motivated

How do I get a good deal?

• Have an objective attitude rather than buy with emotions.

Should I buy one that's in good condition, or should I buy myself a project?

• Make a list of the pros and cons to each

• Too difficult a project may be a bad idea

• A perfectly restored vehicle may have too high a price tag

• Between the two may work well or an older restoration

What is the difference in cost between a restored car and an unrestored car?

• The cost difference can be huge. A complete restoration can cost tens of thousands of dollars. The way to go is to find a well maintained original car although a vintage muscle car in close to perfect original condition can be valued higher than a fully restored vehicle.

What traits do I need to pull this off?

• Resolve all the above.

What tools do I need?

• A basic tool kit is mandatory, and you can select the rest as you go.

How do I make sure it’s safe?

How do I preserve it?

• Proper storage and regular maintenance

What are the different levels of restoration?

• There are purists who may say there's only factory condition or better and that anything less is merely maintenance. Although if you're talking to an enthusiast who likes to frequent racetracks, the answer is likely an entirely different one. Show cars are the ultimate restoration and need to be transported in a closed trailer and rarely, if ever, driven. I think for most of us there are also levels of daily or often-driven classics in various stages of restoration.

Where do I get the technical expertise I need?

• You should have the complete set of factory manufactured manuals, including shop manuals, body manuals, schematic diagrams, and electrical manuals. Some sets are eight or 10 books.

• Just starting a project is the way to develop your skills.

How much space do I need?

• A single car garage is about 20 feet by 12 feet and would work in a pinch, but a double garage would leave plenty of room for storage and working on the vehicle.

What can I do with the interior?

• You can purchase a new interior complete for the most popular models, but an upholsterer can tailor a new interior with similar or identical material as the original

What can I do with the exterior?

• The quality of a paint job depends on how you plan to use the car. If you drive it regularly, you won't want to spend the money on a show car finish. A car can look really good without your being terribly concerned with a normal driving incident like a stone chip that you can cover with a bit of touch-up paint. As long as all the sheet metal is covered with paint, it's protected from oxidization. A flat base paint will only offer short-term protection, and a vehicle

should be sealed with an enamel,, lacquer, or acrylic for lasting protection.

How do I remove rust?

• You can neutralize rust with a commercial metal prep; vinegar and water will also work.

What should be repaired or replaced?

• If a part can be repaired, it's preferable to replacement. Do only what you absolutely need to do. If an assembly is working, don't try to improve it unless you know precisely what you're doing.

How do I fix dents?

• This isn't difficult, but it involves skill and lots of practice with a few inexpensive body-working tools to have a perfect job. You can push dents out from the back side or sometimes a toilet plunger can easily pull out a large dent on a panel to make it look more presentable.

How do I learn as much as possible as fast as possible?

• Hands-on work will help you develop the skill set you need. Start with removal of assemblies that are nonfunctional.

Where can I get advice and help?

• Join a car club.

How do I get the most out of my time and money?

• Restore only what needs restoration. Do not go overboard with your plans.

• Set realistic goals.

• Don’t try to improve something that’s already doing the job.

• Doing all the re and re on your own will save you a lot of cash.

Where can I find examples of other people who have project cars?

• Join a club

• Go to events such as car parades, swap meets, and show & shine events.

Where can I meet other people who have project cars?

• Owning a classic is a lifestyle. Join a club and be active; take part in community events.

What questions should I ask the seller?

• Asking what needs work implies all vehicles need work. You’ll get a better answer asking that than asking what’s wrong with the car, which puts the seller on the defensive, and nothing is wrong with

the car is the answer you'll get.

• Ask about the unit's history.

• Ask the seller if he has any spare parts or manuals.

What questions should I ask the person who does the inspection?

• Make certain they know you need a pre-purchase inspection.

• Make a list and show it to the mechanic although the right mechanic will know better than you what to look for.

• If allowed by your shop, look for anything that does not look proper while the car is on the hoist and the mechanic is doing other inspections. Ask the mechanic about things that look wrong or worn.

What is the single biggest challenge that awaits me?

• Bodywork done correctly is time-consuming and a good job for a perfectionist. The paint prep is the most challenging chore ahead of you.

How can I get my kids involved?

• There are lots of jobs where little helpers can be a bonus, and owning a classic is very much a family thing. The kids will love your car and want to take part with you.

What can I expect to learn?

• You cannot help but learn a lot with a hands-on restoration.

What engine should I look for?

• An engine that could have been in the car when it rolled off the assembly line

Where can I learn more about muscle car history?

• Car clubs and other enthusiasts are a great and willing source of knowledge. The Internet can help you to fill in the blanks.

Where can I find stories about people who have restored a muscle car?

• Any club meeting will have someone who will share stories of trials and tribulation.

What are the pros and cons of buying local rather than long distance?

• Local is the easiest place to find a car. If you must go a long distance to find what you want, prepare to do an inspection in

person. The transportation of a vehicle across the country is possible but find out the costs involved not only with transporting but also re-registering a vehicle in a new country or even another state. It could involve reams of paperwork and possibly an inspection by the licensing agency.

Buying a Collector Muscle Car

Top 10 Buying Mistakes

Phrasing a question to a seller properly is important to get a good answer that will be useful for you. Asking "What work needs to be done? will infer there is always something to be attended to, on an automobile and could get a helpful reply, but asking "What is wrong with the car? can put the seller on the defensive side and you will most likely get "nothing" as an answer.

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✕ **Paying too much** and exceeding your budget, be patient and the right deal will come around, at the price you can handle.

✕ **Not negotiating objectively** - don't be too enthusiastic over the car, particularly if you know it is the one you want. Think it over, take your time, it is a buyer's market.

✕ **Not thoroughly researching target vehicles** - the make, model and year are all important as are the production numbers. Well informed buyers will make their own luck, in a good way.

✕ **Settling for less** than you really want or buying something unsuitable for your purpose**.**

✕ **Insufficient research** for the particular car you are buying - reported accidents - mechanic liens or other legal claims on the car, also whether it has been stolen - all this information can be obtained easily and quickly.

✕ **Too short test drive** - try all conditions and road surfaces, at low and high speeds for half an hour or longer to get a feel of the car.

✕ **Buying a poorly "restored" vehicle**, sheet metal welded over rusted out surfaces and often freshly painted for a quick sale. These

can be difficult for even a trained specialist to spot, at least for the first year. A freshly painted vehicle should raise red flags.

✕ **Buying a rust bucket** - too rusty vehicle cannot be brought back to new without a huge investment of time, money or both. Many coveted cars will have reproduction or original body panels available, but you really have no way of knowing how far gone it is and most likely it is best to just walk away.

✕ **Water or flood damaged vehicle** - wiring and most other electrical stuff will have to be replaced, but any mechanical systems including the engine could have also suffered damage that will have to be assessed. Even if the vehicle has been detailed, there will be lingering moisture or mold.

Online buying

✓ **Check the seller** for previous deals made online and a credit check might also be of some help.

✓ **Scrutinize photos** of the car posted online.

✓ **Lots of questions prepared**. Use the list at the end of the chapter.

✓ **Research the car** - service records if available.

✓ **Inspect in person** if possible or hire a professional to do an inspection.

✓ Online - **pay in escrow** - third party holds the cash until you receive and accept delivery of the car.

Have a check list similar to this one, then make copies and use one for each prospective car. If your restoration requires that all original metal (plastic/pot metal, chromed or stainless) badging, trim and grill work be as manufactured, then make certain your classic is the most complete car you can find. Numbers matching is desirable, as long as you check VIN to registration plus body tags for a perfect match. There may be identification marks stamped on the block, such as part or all of the VIN number. You really should buy what you like, but will lose bargaining power if you get excited about a vehicle. Stay as calm, controlled and objective as possible to get the best price from the seller. Checking the car with a mechanic is a good idea and becomes more important as the price range for the car you are looking for goes up. The money charged for a

professional inspection would be easily recouped with an accurate report on what needs to be tended to. If you find something major, it could be a good negotiation tool to reduce the asking price.

Mileage does count on a vehicle to some extent, but what matters most is how well the vehicle has been maintained. You will not go wrong if the classic you buy has a rare option or has a large fuel consuming engine. It will be well received where ever you go. Be certain to ask the seller if there are any extra parts or a service manual that might be included with the sale. Find out about any insurance or licensing fees that may be at a reduced rate for a classic car. **The 80's and 90's vehicles are tomorrows collector cars,** get yours in its best condition now and possibly at the most reasonable price as well for a long term investment.

Muscle Car Particulars

Details

Contact name

Location

Phone number

Make/model

Value Blue book

Asking price

Vehicle description, VIN, registration number etc.

Questions - you should have with as many as you can, such as:

✓ How long have you owned car?

✓ Who was previous owner?

✓ Why are you selling the car?

✓ Do you have service records?

✓ What work needs to be done?

✓ Do you have any extra parts or service manuals?

Introduction

Our intention with this publication is to help a novice classic car fan to find the right project car at a fair price. The success of your restoration will be determined by the condition of the vehicle you are buying. It is very important to start with a solid car to keep the costs in control; if the vehicle is far gone it will be futile trying to bring it back. The “Buyer Beware” headings give a good description of why and how to perform the checks listed on the last two pages; these are devoted to a pre-purchase inspection and a two page concise check list. You may want to copy and take them along to help eliminate any missed steps you will need to perform before finalizing the transfer of ownership. We attempted to design a program for any novice with modest knowledge to be able to do a restoration with confidence. The work can be done correctly, if not personally, the owner, will have the resources available to competently find needed services or support. This is the first and the most important step to owning your own classic muscle car. The information contained here will be updated and improved regularly

as it is a very broad topic and your additions, feedback or comments are welcomed.

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Priorities & Cost Factor

How flexible are you in the demands you make as to manufacture, model and year you want to own? That will be a deciding factor in getting the best mileage out of your dollars whether an original condition or a restored model is the right one for you. A restored model is likely the cheapest way to go provided you

can be certain the work has been done properly. A daily driver is nice but will require more TLC and maintenance than a special occasion ride. Any daily driver will need basic parts such as gaskets, belts, hoses, brakes and suspension items readily available.

Very high motivation, thousands of man hours and an adequate supply of cash is a necessity for successful completion of any project car. If this is a first collector car for you, be forewarned, a ground up restoration bottom line can be astronomical even on a very clean car. If you are working with a limited budget then let's ensure that you can meet that cost factor with a good cash cushion for the attention a worthy vehicle demands. For the big three American made car companies, most models can be maintained with regular production mechanical parts. Many after-market parts are also widely available - even for some less-seen models while the more common vehicle parts are still being made in many cases. Some of the more popular models from the 50's, 60's, 70's and later will have reproduction body panels, chrome strips, logo's, decals, even reproduction owner's manuals with other

badging still being produced and readily available, provided you know where to look. If you would like to save some cash or the parts are hard to come by, such as for a more uncommon model then a second parts car could be a good idea providing you have storage space. A parts car can be disassembled with a modestly equipped mechanics tool kit, a good quality jack and a portable hand held grinder, but time and patience are also valuable assets. The more tools in the box the easier the job will be - it's that simple. If you have a rare car then you may be forced to manufacture your own parts or find a machine shop that will do that type of work for you. If you can improvise, it can save you a lot of cash in the end.

Seal The Deal Amicably & Getting it home

A lowball offer on a vehicle may be counterproductive and could offend the seller, possibly to the point that, the other party will not want to do business with you. Try offering a price that is lower than the asking price - a reasonable offer with wiggle room for both parties. A cool head will prevail when trying to establish a price

agreeable to everyone. Keep the negotioations light and easy, with an objective attitude. Asking the seller "what parts will need some work done?" is assuming there are always repairs needed, rather than asking "what is wrong with the vehicle?", where the most likely answer will be nothing. The project can be measured in real time from start to finish, with the car in your possession.

You have found a car but it is on the other side of the continent.

This is the perfect car but is not in driving condition. The freight in the continental USA could be from a minimum of around $500.00 on a truck for auto transport to $2,000.00 and more by truck or train from coast to coast. It would also be a good idea to make certain the transport of your vehicle is insured on the chosen carrier. The cheapest option will be if you have a vehicle with a trailer hitch and a tow bar. A more preferred method to transport a valuable collector car would be a flat deck single car trailer or truck; either of which can be rented in most major centers to get your newly purchased car home under your own steam. If the vehicle has been stored for an extended period then the wheel bearings are likely rusted together or ceased up. The vehicle may not roll without

servicing them; a towing dolly could be used under the wheels. The cheapest way is to find a car near your home that will fill your needs and you can drive it home at the end of the day.

Where to look

Let’s start with where not to look for your project car. Curbers make a living buying and selling vehicles illegally, without a licence. You may know someone doing this and it may be a good way to go for you. A stranger selling you a car will leave no place to turn if there is any problem. The car that is being sold may come with transfer papers already signed by the previous owner but never registered. If a deal sounds too good to be true, then more often than not, it will be a sham. Have a list of preliminary questions to qualify each deal. Do not meet in a parking lot, you should know where the seller lives. Someone that claims they are selling the car for a friend or relative that is out of town, may be likely between friends, but selling to a stranger like this is a little bit off base.

A vehicle search can be done by phone or the internet, provided you can get the VIN number from the seller. A search covering the whole of North America can be done before taking the time for a visual inspection. They claim within one minute of having the information needed to do the search, you will receive an email with the answers. The information will include reported accidents, vehicles previous registration changes, if it is listed as stolen, a lien search, and transfer information relevant to the seller's location. https://www.carproof.com/docs/default-source/retail-resources/carproof-used-car-buying-guide.pdf?sfvrsn=4

Finding the right muscle car to fill your needs may be the most time consuming part of the restoration even if you are very flexible in the make and model of the vehicle you want for your project. The car clubs in North America are a good place to start a search for any collectible vehicle. Later on, the contacts and new friends made during meetings can be a big help to find that "hard to come by" part. The clubs are not limited to the big three American manufactures, but also include a host of hot rod,

custom, imported and other specialty clubs. There are many chapters devoted to select models or years of automobiles as well, including Mustang, Camaro, Dodge Charger, Javelin and Hurst-Olds etc. The clubs hold regular scheduled meetings; don't be surprised if there are one or more not very far from where you live. A lot of members are very helpful and in the know about restored or original vehicles for sale. These clubs are the best place to find local contacts, for both parts and advice.

The internet is one of the best tools to track down the car you want regardless of it being a private sale or from an auction house. Sites such as Craig's List, Auto Trader or kijiji plus so many others can turn up an amazing number of vehicles in every price range, within a few hours driving time from your home. Ebay could be an interesting place to start and just may turn up your best deal. Sometimes, ads in local newspapers will have a classic, if you are a bit adventurous - check the estate sales in the same paper. There are an abundance of regularly held auctions by many companies including Barrett-Jackson, Auctions America, and Gooding & C0.

The auction companies will accumulate vehicles for upcoming auctions in their storage yards. You can often inspect vehicles and check over service records before the auction date - just click the contact link listed below for more info. A lot of cars from these auction houses come with a pedigree - showing previous ownership and often service records are available for inspection as well.

http://www.hemmings.com/calendar/

http://www.kijiji.ca/b-cars-vehicles/edmonton/c27l1700203

http://www.barrett-jackson.com/

http://www.goodingco.com/

Buyer beware

Body Inspection

Driving the car to your favorite shop to be checked thoroughly by a mechanic that you know and trust could be a few hundred well spent dollars if the vehicle is safe to drive, insured and seller agreeable. Not only are the under-carriage, frame, exhaust system, shock absorbers and springs clearly visible with the car on a hoist,

you can also check the tie rods and ball joints for wear. Looking up from the bottom is the perfect way to spot oil leaks as well as the rubber parts used as bushings or protective covers, which may be cracked and deteriorating. A thorough inspection in a proper shop is the surest way to be certain that your prospective purchase is worth the investment. A coveted collector car, fully restored, will command a high price. A car 20 or more years old will not have a listed value through the normal channels, like Kelly blue book. You may have to go by the price other enthusiasts would endorse or subscribe to any number of appraisal sites a simple web search will turn up. Bring a friend when you look at a prospective vehicle, who can start looking at the car while you check the papers and deal with the owner. Check that the VIN number matches the registration; a look at service records and repair/maintenance receipts, remember to also inquire about the car's history. Accurate records kept showing type of repair made, with mileage and dates is a sign of a properly maintained vehicle. A small tool kit may come in handy when you look at the vehicle, but make certain to include a

magnate and a circuit tester. Any flaws you can find could be good fodder to lessen the bottom-line price.

Look at the car early in the day, and if it's an option, show up an hour or two earlier than the scheduled viewing time. The best time to see and check over a car is during the day and when the engine is cold. Observe the body lines from all angles using the sunlight to help show imperfections and past alterations, such as dents and dings; sun will also show clearly whether any shoddy, quick-fix body work has been done to hide damage for a quick sale.

Multiple shades of color on a car are a sure sign the cars has been in a number of crunches, with minimal repairs made. A magnate is a good tool to find body panels repaired and will readily show the places any filler materials were used over the sheet metal. Look for any rust or paint bubbles (they hide rust) in all the obvious places, but pay particular attention to the lower part of the car, underside of the doors, the rocker panels, the fenders behind the wheel well and the inner side of wheel wells. The exhaust system

could also be rusty - take a look and try to wiggle the pipes - if they move then hangers will have to be replaced. While you are under the car look for oil leak spots and observe whether the frame is rusted or has sustained any serious damage due to a crash. Also look at any visible rubber boots, covers or dampers for wear damage - any cracked or dried out rubber components will need replacing.

Open the driver's door while wiggling the door up and down on the outer edge - if there is play and the door wobbles, then the hinge pins and bushings will need replacing. This may be a good time to make certain the all the doors and windows are working properly. Make certain the key fits all the doors and the ignition switch. Roof openings of any kind, particularly slide open sunroofs have a reputation of leaking, check the headliner for water marks and look around the upper frame, on the roof, for rust and paint bubbles. Racing stripes look cool, but flat black ones running down the lower portion of a car lengthwise, should bring up red flags. The stripes can hide a lot of wear and tear from a casual observation with ease. A unit with a fresh paint job could also be suspect, so

take a look at the undercarriage, behind the tires, on inner door panels and in corners may show over-spray from a cheap paint cover-up application. You will be able to make many other simple visual observations that do give clues on how an automobile has been cared for. After market non-functional scoops can be used to hide damage or rust. Check all door, trunk including hood clearance gaps and thier position relative to the body; making certain all are the same width gap - a miss fitting panel is a good sign of previous damage. A rusty car is not a good choice for restoration, although an intact one could be an excellent source of cheap parts. A vehicle stored under cover and/or from a dry southern climate is often a better candidate for restoration than a vehicle that has been used in harsh winter conditions. Look for a block heater with its tell tail 220 or 110 Volt electrical plug is a certain sign the car has been used in the great white north.

The bounce test can be performed before a test drive to see if the suspension is worn. Put all your weight down on each fender above the wheel and quickly remove your hands - the vehicle

should return to the original position immediately with only one bonce, but if the vehicle bounces a few times the suspension (shocks & springs) are worn and will need to be serviced and/or replaced. Look at the car from each corner when it is sitting on a flat surface to see if a weak or broken spring is allowing one corner to sag - the vehicle should sit level.

Water-flood damage

Pure distilled water will not conduct electricity or damage electronics but water with dissolved sediment, such as salt and other minerals, which includes any ground water will be an electrical conductor. You can be almost certain all the electronics that were submerged will have to be replaced. Newer cars will have the fault codes show up on the dashboard when the car is started and could be suspect for water damage. Carpeting and seats can be cleaned and dried but the burlap (Jute, Jut) carpet liner will deteriorate and moisture lingers, much of the interior will have to be replaced as well. A flood damaged vehicle could have been detailed and

thoroughly cleaned out but it is difficult to remove all the clues of flood damage. Be wary of any interior that smells sweet and appealing - scent could have been used to hide the smell of mold. Look under the side of the seats, if soaked they will stay damp for many months as will gauges (foggy glass) and other electrical devices. The underside of interior moldings may hold a clue-look for lingering moisture or water marks. Any metal surface containing iron is ferrous and will show rust when exposed to water, but some oxidization is normal on any unpainted iron alloy. Bolts, seat springs and other interior metal components could show an unusual amount of rust in uncommon places - under the dash would also be a good place to look. If you suspect water damage, have a trained and trusted professional perform a very thorough inspection before you purchase any vehicle that may have been in a flood.

Under The Hood

Start with all fluid levels; engine oil, coolant, brake fluid, power steering fluid and battery acid levels are all important to monitor for

trouble free driving. When topping up the battery acid, use neutral PH water. The automatic transmission fluid should have the fluid checked according to manufacturer’s specifications, normally with a warm engine running. The tranny fluid should be a transparent reddish color, with no burnt smell and the level must be at the full mark for smooth function and to cool the automatic transmission. Check the engine's oil level on the dip stick; if it has recently been changed it is semi-transparent or if it is black a change will be required soon - neither of these are bad signs, but they are indicators. If the oil is white and frothy then water is present and could lead to a large repair bill. The reason there is water in the oil, could be as simple as a worn out head gasket, but could also be a crack in the block or engine heads. Remove the air filter and if you find it dusty, its normal, although dust caked on the filter means it’s time for replacement, but splatters of oil are a sign of oil blow-by, leaking from the engine. All rubber belts and hoses should be inspected for cracks, brittleness and/or leakage. Dry old rubber and neoprene components are all candidates for immediate replacement.

Look at the wire insulation where they connect to the alternator or starter - if they are dry and old then a new wiring harness may be required. Battery corrosion will insulate electricity and may be easily visible, but not always - remove the battery cable and look at the actual contact point for both battery connections. If the contact with the battery is not good, the battery will not be fully charged. The remedy is to clean all four contact points with a special terminal cleaning tool (works best), but a small steel brush, or steel wool will also work to restore a solid contact. A volt meter will tell you if the alternator is putting out the 14 volts needed to keep the 12 volt battery charged plus run the cars electronics.

The timing chain (belt) is located behind the water pump at the front of the engine and connects the valves in the engine head(s) with the crank shaft in the block to keep them perfectly timed together. An older car will have a steel timing belt, good for up to 160.000 km (100,000 miles) and possibly double

that. American made cars, starting around the late ’70 begin the switch to a rubberized material that will last in the range of up to 80,000 km or 50,000 miles. The steel belt wearing out will usually give some signs such as backfiring or delayed response when it is time to replace it, but the newer type rubberized belt will suddenly break - leaving you stranded without warning. Check around the housing at the front of a newer vehicle for a decal with the mileage of when the last timing belt was replaced, a service record would be helpful. The belts should all be changed according to each manufacturer’s instructions to avoid a sudden breakdown. Make certain the water from the radiator is circulating, remove the radiator cap (cold engine) and you should see (feel) the warming water circulating within a few minutes.

Starting the engine

Starting the cold engine - observe if there is a puff of blue smoke that could indicate worn valve guides. The exhaust system is blowing out black colored smoke the fuel mixture is too rich, but if

the exhaust emits blue smoke then oil is burning and the engine is losing compression, possibly from worn rings on the pistons in the firing chamber. With the car running, remove the oil filler cap to check for oil blow by - also seal the dip stick tube with your thumb or palm - if pressure is felt or oil droplets are present its normal. Some oil blow by is normal but too much is a sign of wear. Gray smoke coming through the oil filler tube could be coolant evaporating inside - due to a bad gasket or a crack in the heads, and a cracked block is another possible reason. You may have a major engine repair ahead.

With a power steering equipped car, engine running, turn the wheel fully in both directions - it should turn soundlessly without jerky movement in both directions. The car should start easily, whether it is cold or warm. The engine should run smooth and regular without any bangs or clunking. It is normal for the RPM to be higher when cold than hot, as the automatic choke reduces the fuel intake after the engine warms up. Put the running car in gear (automatic) it should slip into gear immediately; no hesitation and

without clunking. Most automatic transmissions have a clear red fluid for lubrication and cooling. The fluid should be above the add mark on the dip stick and not have a burnt smell. Transmission prepares or replacement could be just around the corner if the fluid is blackish color, has metal filings present or burnt smell. Most automatic transmission fluids should be checked with the engine in neutral, warm and running, but check the vehicle manufacturer's instructions if you are not certain. The gears may "chatter" on a standard transmission that is not working properly, also if one or more gears are hard to find, it may be time for a rebuilt transmission. A malfunctioning clutch may be sluggish to grab with the engine increasing RPM rather than increasing speed as it should, however, the clutch may simply need adjusting. The mechanically operated clutch adjustment is a shaft and bolt, located under the hood, on the driver's side, near the clutch (bell) housing, around where the clutch pedal comes through the fire wall. Turn the bolt after loosening the lock nut and note how much adjustment is left before it is maxed out. The hydraulic clutch has a master cylinder with a tube attached to the bottom leading to the slave

cylinder. There should be no leaks at any join and the master cylinder should be full for correct operation. If neither operation solves the problem, the clutch is faulty and will have to be removed, which is likely due to worn plates and/or throw out bearing.

A field compression test can be done on the engine's firing chambers to determine if the pistons (rings) are a tight fit in the cylinders, to deliver the engine's full horse power rating. First, disable the ignition by pulling the coil wire on an older car. Remove each spark plug to check each cylinder, one at a time. Listen to each cylinder - they should all sound the same. Using your thumb, block the spark plug hole - note the pressure pushing your thumb off the hole - the pressure should be about the same - even and regular over each hole. Poor compression will result in blow by that sounds uneven/irregular and the blow by will be increased on a weak cylinder. This is just a rough check but will give you an indication. An engine can be properly pressure tested by inserting a pressure gauge into each spark plug hole and then noting each

reading as an assistant turns over the engine with the key. If the battery is functioning and supplying power to the starter it is easy to check the engine compression. An engine that is not turning over can still be checked the same way, but by turning the engine over by hand after first removing the spark plugs. With the hood open try to turn the engine over with your hands where the belt meets the pulley at the crankshaft or the water pump. For a higher compression engine and/or a seized power plant try removing the spark plugs and spray some lubricant into the firing chamber though the plug hole if needed. Take care to disable the engine from starting before doing a cylinder pressure test. An automotive engine should have a pressure reading between 140 and 160 lbs. Cylinders with an extreme variation of 10% or more from the others should be retested for accuracy. If all the cylinders read about the same pressure; with little variation, this is good news.

Test Drive

Okay, the engine is warm! Let's put down the top and go for a test cruise! Not yet. Make certain all the gauges, warning lights, turn signals, headlights, clearance and running lights are functional. Also, check the four way flashers, heater, defoggers, horn and wipers to complete the basic items. Heaters have a core similar to a radiator - a wet floor/carpet could be a sign of leakage which might mean a new heater core is needed. If the headlights go brighter when a running engines RPM is increased; it is a sign the battery is not fully charging; the battery or the alternator (generator older cars) or both components need to be checked and replaced as needed.

Put the car in gear with the emergency brake on - if it holds it - its working and you can let it off with confidence that it is working properly. An automatic should shift into drive from park quickly - more than two seconds means response is too slow. While driving try coming to an abrupt stop and if the steering wheel pulls to one side it could be an alignment problem, low tire pressure or one wet

brake shoe/pad. The transmission should shift to each gear crisply, although a higher performance automatic will shift sharper, with a bit more of a jolt than a family sedan might. Put the car through its paces, rapid acceleration is fun, but if you leave a cloud of smoke behind during a jack-rabbit start then excess emissions are the culprit and it is likely one of two problems. Blue smoke in a large screening cloud, as seen through the rear view mirror, is burning oil, but the black smoke is wasted fuel and the fuel delivery system should be looked at more closely. You can try the vehicle over all types of surfaces and all driving conditions, such as on the highway and in city traffic. I would have to try a twisty mountain road somewhere to get a good feel for the car's handling. Clanks, clunks or other strange sounds should be noted and traced to their source. A high pitched whine coming from the wheels may come and go, that could be the squealers on the disc brakes telling you it is time for replacement. Drum brakes will have to have the wheels removed to check the wear.

Old gasoline in the tank may not be good and could prevent a stored vehicle from starting - fresh fuel is in order. The unleaded gasoline has a shelf live of about six weeks before it starts to deteriorate. If you are using a "green" gasoline like the 10% ethanol the shelf life is even shorter. A fuel additive is available from your favorite auto parts house to extend the fuel life up to six months, but read the instructions and follow them precisely for best results.

Checklist - Two pages

Under the hood

✓ General appearance - see previous pages

✓ Note any gas, oil or burnt smell present

✓ Battery terminals - check for corrosion

✓ Power steering, brake fluid check

✓ Water hose connection points - at the block and radiator top/bottom

✓ Any oil leaks - around the rocker covers/heads

✓ Water level radiator-pressurized - follow manufacturers cautions!

✓ Look for signs of rusty water marks staining the radiator

✓ Oil level engine - also color - white/frothy means water in the oil - major engine repairs needed

✓ Check transmission oil - color/smell - check oil level according to instructions

✓ Check belts including fan or the universal drive belt(1/2 inch play-okay)

✓ Intake manifold - rushing air noise - exhaust leaks

✓ Exhaust manifold or both if so equipped

Other easy checks:

✓ Very important that all warning lights and, in particular sensor warnings should all be visibly functional when the ignition key is in the “on” position, but all warnings systems are set to rest state when engine starts.

✓ Oil leaks and drips on and under the engine compartment

✓ There is no easy way to check if Air Conditioning works in the winter time at freezing temperatures.

✓ Rubbers on front end and suspension components - check for cracks & wear

✓ Oil or grease leaking from each wheels center hub - bad bearing

✓ Disc brakes will have visible wear indicators.

✓ Tire condition - check both in and outside tread depth or uneven wear

✓ The above tire wear pattern will indicate if front wheels are aligned correctly.

✓ The front wheel will wobble when lifted off the ground with the help of a hand on each side will tell you the wheel bearing is worn out.

✓ Are the muffler and exhaust pipes corrosion free and still attached to the hangers

✓ Check under carriage for signs of accidental frame damage

✓ The seal on the gas tank filler cap should be intact

✓ Under carpets and matting at the floor boards for rust-under the

gas pedal, under the seats and in the trunk as well.

✓ Check the shocks and spring return - at each wheel

More thorough checks

✓ A standard transmission should have a clutch pedal adjustment bolt with visible thread showing on each side - located at the driver's side of the engine by the firewall

✓ Drain engine oil - check for metal filings due to wear

✓ Transmission oil - check the level, color and the odor (no burnt smell)

✓ Drain and check both the inspection plate cover and fluid for metal filings

✓ Rear end (differential) - check fluid by removing drainage bolt - oil should be to the bottom of the hole.

✓ Remove wheels to check the brakes if they are drum

✓ Check brake wheel cylinders(each wheel) for leakage as well as the master cylinder - normally mounted under the hood at the

firewall above the foot peddle

✓ Pressure test engine cylinders.

Driving checks

✓ Check lights, signals, horn, wipers and gauges

✓ Transmission oil checked/conform to manufacturers specs

✓ Starting - both cold and warm starts should be quick and easy

✓ Cold start - gray smoke is normal from exhaust

✓ Warm engine exhaust should not release any smoke, only condensation in cold weather.

✓ A warm running engine should not have any visible smoke increase upon acceleration

✓ Black smoke is too rich gas mix

✓ Engine runs smoothly but a “ropy” idle, with some shaking or vibration could be normal on high performance machinery

✓ No hesitation and no miss-fire or back firing during rapid acceleration

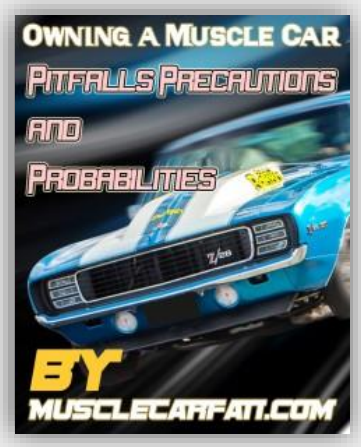
✓ Steering wheel has no free play

✓ Clutch pedal should have a minimum half pedal travel distance

✓ Brake should feel firm and not mushy or pedal travel to the floor

✓ Hard braking action should not pull steering wheel towards either side

Owning a Muscle Car: Pitfalls, Precautions, and Probabilities



If you have a passion to drive a muscle car with limited money to spare then this guide is a must read for you. You do not need to be a mechanic but should want to know your vehicle. You could feel comfortable undertaking the removal and replacement of parts after having a professional rebuild them, if necessary. You would also enjoy knowing how to perform basic maintenance needed to keep your car in top condition. Even if you don't plan on doing the work yourself, this book could be a valuable guide. A simple restoration can be done in a year or even less in some cases. With a labour intensive and challenging project ten years is not a long time to spend on a rare model turning it into a perfectly restored piece. This is a labour of love. Make sure you have time on your side particularly for a challenging project where you may have to manufacture some of your own parts or find a machine/body shop or enthusiast willing and able to turn them out for you. By starting

with a solid project vehicle and by carefully keeping the car close to original factory specifications you will not go far wrong with any chosen project.

When the question comes up: “What is your favorite muscle car?” Then you could get a different answer from any number of muscle car fans. A multitude of manufacturers have sold collectable vehicles for a hundred or more years. For a select group of us, the choicest cars are American engineered and from the 1950’s, 60’s or 70’s, although any car that is quick for its time is held in high esteem by a majority of fans. A list of quality made collectable examples, worthy of restoration would fill a thick book. The models to be avoided or cast off list, would be larger though, with some examples turned out by almost every auto factory on the planet. Be an informed buyer to get the most pleasing results. If you have a pocket full of cash and are thinking of buying a fully restored classic muscle car with matching numbers then this book might still be a good conversation starter or library addition. You could also watch for the sequel “A Classic Automobile As An investment” - both

books are exclusively offered and backed by the Muscle Car Network.

Make a List

Have a short list or longer list is even better to find the sweetest deal rather than one particular version or year only. A longer list will improve your chances of finding a suitable unit within your budget; but be certain to buy a vehicle that you will still want to drive after the novelty has worn off. Driving and owning your classic muscle for the long term will make a restoration a break even or better proposition for you. A vehicle made in large numbers will have maintenance parts for service and occasional replacement parts readily found. A low production vehicle will still have basic mechanical parts for the suspension, brakes, engine, and drive chain selectively easy to locate. It is not usually a problem to find either new or rebuilt mechanical parts even for many less common models because of shared components. Some of the highest performance engines, bored to maximum tolerances, often do not

have as long life as their lower powered counterparts and may be more difficult to handle in city traffic at lower speeds. Chromed trim pieces, grill, logos, and other model specific items can be very difficult to replace and in some cases innovation is the only solution. Some parts and sometimes any part can be difficult to find without an intense search. A car that has matching numbers may be important but you can expect to pay a big premium to get them. A matched numbers car may also get a higher resale value but the car will not run any better than a car without matching numbers.

Model Track Record

Know as much as you can about your targeted car groups for the quantity of factory produced units made both for your specific year and its particular generation production span. Research any peculiarities or shortfalls for each model firstly and have some idea of whether there is a supply of after-market parts in production are two important steps. Some of the more commonly coveted collector cars have a huge aftermarket industry supply pool at competitive

prices such as a Mustang or Camaro. Did you know that there are engine, door/window, mechanisms, even if they are sealed or disposable parts, that can occasionally be rebuilt and renewed using salvaged items. Parts including some generic springs, hooks and fasteners can be pirated from a later unit and used to repair an earlier type even from dissimilar models or manufacturers in some cases. They can be then reassembled with rivets, screws or by welding if you are knowledgeable. There are some of these components that have been in production for a very long time and are easy to come by if you know where to look.

Target Unit History

Specifically know about the car you are buying or just ask the seller if no history is offered. Some questions you might ask are: How many owners? Has it been in a serious accident? Has the manufacturer's suggested maintenance schedule been followed? Is there a service record or receipts for work done available? All are valid questions. Proportionally, as the prospective project's asking

price goes up, delving into the vehicles past history should be more focused. What type of climate has the car been used in? Has it been out in the weather or parked under a roof for protection? High mileage is not really an important issue on a vehicle that has been well maintained and cared for properly. Buy as complete vehicle as you can find. A realistic price tag on a good clean vehicle is the right choice for any project application. If the car has undergone any major structural changes to the frame or the interior has been altered with added holes in the dashboard or a “chopped” roof-line then leave it alone. They are good examples of things to avoid and a good car to walk away from. Mechanical issues such as delayed response, knocks, rattles’, grinding, excess vibration, steering irregularities, suspension clunks and clanks deserve a more thorough inspection. Either you or your chosen mechanic should give the car a closer inspection before closing the deal. However, needed repairs can be a good bargaining chip to bring the asking price down as long as you are prepared to address the problem later. Try or observe each lock, handle, window winder, instrument cluster and lighting; make certain all are present, intact and/or

functional. Have a list of things that you need to check to avoid missed steps. A friend is good to take with you to help inspect especially if they have a mechanical aptitude. You can deal with the owner while your friend continues the checks uninterrupted. Look at the body tag and note the VIN number. The body tag will tell you the original factory equipment or even the original color and the VIN can be used to search the vehicle for clear title-free of a mechanics or any other liens that must be paid before transfer of ownership can take place. Make certain the ownership papers are with and match the car you are buying. Papers can be legally obtained if they are not available but it is an involved process and probably not worth your time. It may be tempting to buy a car from the internet, without actually seeing it, but this is a flawed plan for many reasons and could lead to a very poor start.

Rust and major accident free

Above all a project car should be within your skill level. Be prepared to at least do the removal and replacement of the new

parts. A rust free, straight body is a very desirable piece even if the mechanical falls a bit shorter than you would like. Look down and up each side of the vehicle from all angles looking for continuity and poorly done body work. No rust-though damage on the rocker panels or on both inner and outer fenders to the rear of each wheel. A hood with any but the most minor blemishes is most difficult to flawlessly repair so finding one without fault, flat and true, is a big plus. Check thoroughly under side of doors, beneath floor coverings, floorboards at door post corners in the cabin as well as the trunk for serious rust damage. Body panels and other pieces such as the rocker covers and floorboards can be replaced on almost any car if needed, but these and other rusted out pieces will help inflate your bottom line very quickly. A car that has serious rust damage is not a good project car. A frame damaged in an accident or rotten is also not a likely candidate for restoration, even if you are a fully trained body restorer. It would be a very good idea to walk away from any of the above unless it is complete and cheap enough for a parts car. Body work is not difficult and can be done

with a few simple hand tools if you have the patience and time to spare.

Preparation & Organization

Do not randomly begin removing parts without first having a plan. If you are dismantling the engine or any other assembly you must have an idea what needs to be done before you start to avoid unneeded work. “If it is not broken don’t try to fix it” is a good rule to follow. You must have the right tools and have the ability to use them. All the tools I mention below will be needed but there is no need to have them until the time is right so purchase additional tools as you need them. A basic socket set, open/box end wrenches, ball peen hammer, assorted pliers, screwdcutters rivers, etc. are basic necessities. However I would also suggest having a floor jack, axle stands, and a portable hand grinder. If you are competent a welder would also be a good addition, while compressed air tools can make “re and re” a breeze. If you have to buy a complete tool kit then allow around $600.00. Adding an

adequate welder may more than double that figure. To begin with, all the removed parts should be organized, stored in groups and possibly in order of removal to simplify their replacement. Place groups of parts such as engine attachments, radiator assembly, inner door workings and dash parts in separate containers complete with the correct fasteners or attachments labeled and in baggies. An old wiring harness should be carefully checked during dis-assembly as a precaution. Exposed wires can be an extreme fire hazard when worn or have been spliced. When you receive a new parts order make certain they are the exact ones you need and the order is complete as soon as you get the shipment.

Parts-Quality and Knock-offs

Parts availability is very important and a very diverse network that can be opened up to you through numerous sources. There are a large variety of car clubs, numerous car swap meets held on weekends and holidays. There are an almost limitless number of retail outlets in all major centers with parts on hand or that can be

brought in very quickly if needed. The cost may well be hinged to your urgency but a piece can be ordered from anywhere in North America and be at your home in less than a week by normal channels although much quicker if you want to pay a higher freight price. Some of these retailers will further assist you by taking advance orders for your project to have them on hand when needed. On the other end of the scale: The part you were led to believe was on the shelf is not and you find out when you put in an order that a part will not be in stock for a few weeks or even months. The manufacturer will not produce the part until a minimum quantity order list is full. This can be frustrating when your project must be put on hold until the part you need arrives. There are also specialists working out of their home or in small shops renewing simulated wood grain trim, plastic molded inner door panels, rebuilding plastic steering wheels, restoring/upgrading original transistor or tube radios as well as almost any other specific or unique item you may need or want. Some of these “small jobs” can be very expensive as well as time consuming repairs taking months to complete properly.

Avoid low cost knock off parts if possible. For example a generic or model specific wiring harness can be ordered for almost any vehicle, but a budget priced one for my car was only $100.00 less than a top quality wiring harness. The cheaper harness came without the clips or plugs on the ends of the wires meaning an electrician would have to spend many hours soldering or otherwise attach the needed clips. The quality of body panels, brake pads/disc's, and many electrical parts including starters, alternators and any number of performance parts will vary in not only cost but also quality. Try to find the product that is at least up to factory specifications which will not only be more dependable but can save both time and cash in the long term. A new restoration can also take advantage of advancements in materials such as carbon fiber, more durable composite rubbers, space age sound proofing, stainless steel, and other top quality materials that fit like the original but look better and/or last longer.

Storage and Long Term Care

Regular maintenance, regular use and suitable storage are the most important steps you can take to protect your investment. Your project car storage area should be at least a covered one, even in an arid climate. If you are living in a more temperate area a garage would be a better spot and where I live a heated facility would be preferred. A restored vehicle you value should also be covered with a tarp to protect the car's finish particularly if it is being stored over the winter or longer. The storage area should have at least three feet of room all around the car with more room on the work bench side to comfortably perform any of the required maintenance operations to provide enough space.

Thanks to Terri and Michelle Hamer for their helpful and amusing ramble on the things you may not think of before you own a collectible vehicle - the article is the first listed below.

https://classiccars.about.com/od/owningaclassic/bb/beforebuying.htm

https://www.restore-an-old-car.com/project-car-buying-guide.html

https://www.tflcar.com/2014/03/load-bearing-paint-top-5-pitfalls-of-classic-car-buying/

https://www.ebay.com/gds/8-Tips-for-Buying-a-Collector-Car-Online-/100000000177634804/g.html

https://www.reddit.com/r/projectcar/comments/163nfw/a_guide_to_your_first_project_car/

Epilogue

Make certain you have enough time to give the research needed for each of the make and year of vehicles on your short list. When I inspect a prospective vehicle to purchase I feel better seeing a chipped, faded, worn, or otherwise used but well-kept original look. This is more positive sign than a freshly painted unit which could hide many flaws and poor workmanship. On an older well maintained car I like to open the hood to see an engine that is not sparking clean at first glance, but slightly grimy although not neglected is on the positive side. When the engine is in need of

cleaning it will be more obvious where any oil or water leaks might be. The rubber hoses and fan or universal belt should not be dry, hard, and brittle with cracks showing. If the wires leading to the alternator and starter are dry and crack easily then likely a complete new wiring harness is in order. The water in the radiator should be circulating and not be rust colored. The water will be an opaque blue or green color if it has anti-freeze or special factory coolant mixed with the water and is also normal. The battery should have fluid (add clear neutral PH water) up to the full mark and not have corrosion visible on the contact terminals. The more time you spend finding a likely candidate for your project and the more selective you are in your choice, in most cases, will equate to less time and less money spent on a quality restoration. A parts car can save you a large sum of money in the long run if you have enough storage room for a parts inventory. A car can be stripped of all the usable items in a very short time with mechanics basic tool kit, a portable hand grinder, a jack and blocks. The hulk can then be towed or trailered away - possibly for free or if you know the right people then the leftover metal can be readily sold for scrape.

A word from some who have been there about the attention your classic muscle car will often attract every time you drive it. You will see a car in your rear view mirror on occasion - weaving through traffic trying to catch you, only to ask you a question or want to tell you a story about their car. When you are in your vintage wheels people will want to talk to you and often times do not realize you may be in a hurry and don't really have time to talk. When parked there will often be notes left on a classic cars windshield. I did buy a very inexpensive and complete parts car with one well-timed note left on my windshield. "You are the proud owner of a classic muscle car; now your vacation time will be spent going to a car show, car meet, the track, a cruise by or other vehicular oriented event rather than at beach resorts or golfing. Any but the most urgent home repairs and the lawn might be put on the back burner while you play with your car".

How to Maintain Value with Proper Maintenance

Top 18 Ways to Preserve the Value of Your Muscle Car

Time will take care of a collector vehicles value, if you take proper measures to keep the car in as good condition as possible.

✓ Set up proper storage that is organized and ready to use even BEFORE you have the classic you want

✓ First impressions count - Wax on wax off-detailing done regularly will keep a good paint job looking bright and fresh for many years

✓ Put a cover on the vehicle when it is not in use, even if it is only parked for the night to preserve the finish. There are also four season car covers for cars kept outdoors, but these covers do not breath and condensation could be an issue..

✓ Abusive driving habits will add wear and tear making a restoration age much quicker; A muscle car must be put through its paces occasionally and driven the way they were made to

be. However, respect for the vehicle's historic significance is paramount

✓ Accurate maintenance records are essential, even if you do the work yourself; Keep a log and the receipts for any material you purchase for the car.

✓ Changing fluids by time instead of mileage is the best plan for a collector car if it is not driven often.

✓ Rare options and upscale models are the most sought after; If you need to, add items that could have been optioned in your car when it was in the showroom. If you can find an odd or an unusual optional accessory, it can make your vehicle very attractive to others.

✓ Repair oil leaks as soon as you find them. A gasket that leaks needs to be replaced, but sometimes the leak can be repaired by simply tightening bolts that have managed to come loose.

✓ Keeping the car original- change nothing without being very certain its an acceptable upgrade. Add nothing unless it can be later removed without a trace

✓ Safety and performance upgrades may be acceptable for some things like seat belts, or replacing drum brakes with disc, or even an aftermarket fuel injection system. However, be certain to keep all the original parts with the car to give any future owner the option of returning it to factory perfect condition.

✓ All maintenance/repairs should use the highest quality parts according to original specs. An old part made by the manufacturer is the preferred choice with an aftermarket modern equivalent the second choice. Buying cheaply made knock off parts to save a few bucks is a very bad idea.

✓ Repairing the original part is preferable to replacing with a new one and in some cases it may be the only option..

✓ All gauges should be calibrated correctly, plus systems kept working properly and accurately.

✓ Use a fuel stabilizer and keeping the tank close to full when stored, will help prevent condensation from forming. If the fuel has deteriorated or if you even suspect it has then siphon out the old gasoline and replace it with fresh fuel.

✓ Make a habit of keeping a moisture absorbing product in the vehicle at all times. Just a few briquettes of charcoal may do the trick nicely.

✓ Rust will always show up-deal with it immediately. Watch for signs like paint bubbles and touch up any minor scrapes or scratches with same color paint.

✓ Avoid eating meals and snacks in your classic – it's not a restaurant-avoid spills and do not smoke in the car to keep repulsive odors and stains at bay

✓ Know which vehicles will hold their value best check: http://www.nadaguides.com/Cars

Tune up-Cam & Ignition Timing

A properly tuned muscle car engine will purr like a kitten or roar like a lion on your command, without hesitation. A tune up is not about aesthetics though, it is about delivering dependable and trouble free driving, day after day, for many years, performing

flawlessly. To keep an engine well-tuned, there are some parts in the ignition that need to be checked and/or replaced about every 10,000 to 12,000 miles in a car that is driven regularly. An engine that is hard to start, stalls easily, rough or ropey idle, and back-fires are some signs that mean an ignition tune-up is imminent, but a well-cared for classic would have these problems addressed before they appear. Other maintenance items that are normally done at the same time as a tune-up are to replace both the gas and the air filters.

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An ignition tune-up would consist of inspecting the distributor and its contents, the points, condenser and rotor, as well as a new coil wire, spark plug wires and spark plugs. I would normally change the points, plugs and other components, regularly, but the distributor cap should also be inspected closely each time. Look on the inside of the distributor cap for cracks and make certain there is positive contact with the rotor which should not look burnt or have crusty deposits on the metal surface. It may be difficult to understand exactly what you are doing, but it is easy to perform a tune-up and it can be done by a novice, with a basic tool kit that includes a timing light. If you do remove the wires from the distributor to the spark plugs, make certain that they are returned to the exact same location to keep the right firing order. The firing order may be stamped into the intake manifold, or check the owners manual and you can find which distributor contact point is for number one cylinder in the owner's manual, but this is a bit tedious and a mistakes are common; therefore, it would be much easier to draw a diagram of the distributor and which wire goes to each plug to keep the correct firing order. The spark plug gap must be set with

a feeler gauge. The same gauge is also used to set the distributor point gap - this is adjusted with the point contact sitting on the top of the cams lobe. It is not important that you know exactly what is done when you set the ignition timing, but it is very important that you know when it is time to adjust or renew it. This is all you need to know, but simple explaination of engine timing follows for those that want more depth..

© Urric11 | Dreamstime.com - Spark Plug Photo

A four stroke engine is a complex symphony of movement perfectly orchestrated and repeated thousands of times every

minute as you motor along the road. The crankshaft, camshaft(s), pistons and connecting rods are moving at a high speed and with great momentum. The pistons are moving up and down, pushed and pulled by the connecting rods driven by the crankshafts rapid rotation, while the valves are moving in and out to the revolving of the camshaft. The cam timing controls all these heavy, strong pieces with the timing belt (or chain) operating the camshaft in the head. The belt takes the energy from the crankshaft with each explosion and passes it on to the camshaft or shafts ensuring that the valves will be out of the way of the pistons at the perfect time. The cam timing ensures that all this movement taking place is controlled and purposeful. If the cam timing is not precise then serious engine damage can occur with a high price tag to repair. A rubber or neoprene timing belt should be replaced according to the manufacturer's specifications to prevent major damage, but 60 to 80 thousand miles is the maximum life span for most cars. The timing chain used in many 60's and 70's muscle cars is a metal one and will give some warning that it is in need of replacement, but will last much longer than the belt style. The cam timing must be very

close to perfect in a car that is drivable, but if a timing belt snaps the engine will die and the vehicle will roll to a stop. The engine would run very poorly, or would not start at all if the cam timing is off even a little. On a muscle car equipped with mechanical valves, they will also periodically need to have the backlash adjusted to maintain peak performance.

A muscle car engine has the following **four strokes** to complete each cycle:

— **Intake stroke** - the piston sucks in the fuel/air mix, through the open intake valve as the rotating crankshaft pulls it back down, the valve closes as the piston starts to rise compressing the gaseous mix.

— **Compression stroke** - the gas vapor is compressed culminating with an explosion

— **Power stroke** - the explosion forces the piston back down the bore hole, forcing the crankshaft to rotate

— **Exhaust stroke** - the piston rises and the spent gases are forced out of the firing chamber through the open exhaust valve. The correct ignition timing is the ticket. The spark plug ignites the fuel mix at the precise time needed. If it is a little off, the engine will have a ropey idle, plus lose some power, but a little more off and the engine will back-fire or stall, if it runs at all. If the engine has no spark at all then the coil may need to be changed.

Car Covers - Mold - Moisture – Coolant

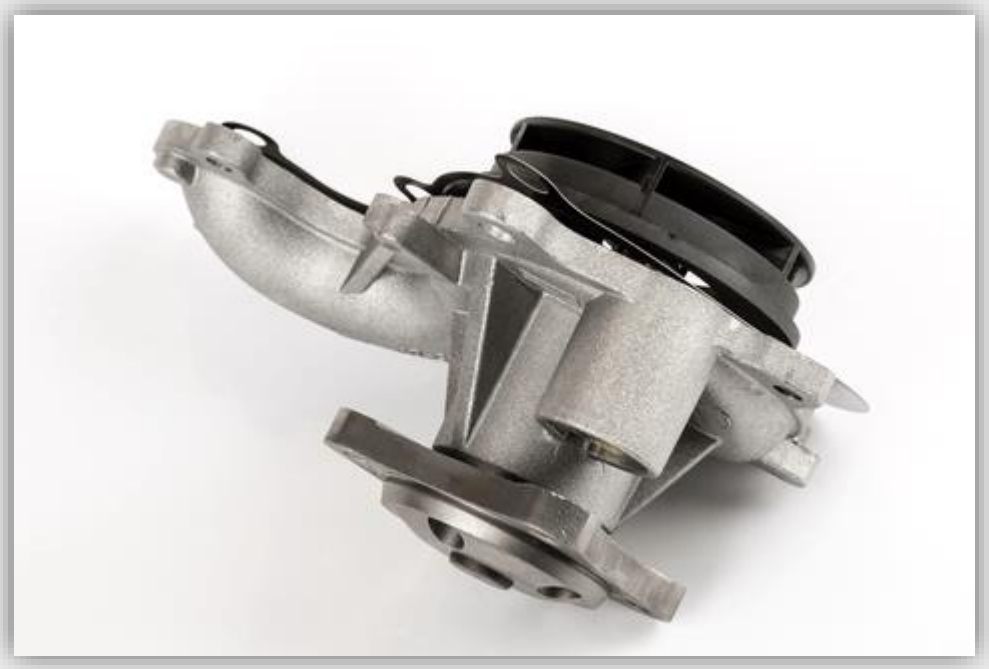
Covering your classic car when not in use is important, to keep dents, dings, tree sap and bird droppings from leaving a permanent mark on the paints surface. A breathable cotton cover will allow moisture to escape and protect the paint from gathering dust when the car is stored under a roof. A waterproof outdoor style car cover is also available, which can also be used in an emergency, but a covered storage site is the more preferable option. Your classic may be placed on the back burner for a while and weeks turn into months, therefore each fill up should be treated

as the last for the season. A fuel stabilizer should be added to any gasoline that could be in the tank for more than a month or so. Another protective measure is to keep the gas tank three fourths full when parking your car for an extended length of time, to minimize condensation and evaporation.

© Ratmandude | Dreamstime.com - New Model, Not Yet Revieled Photo

Another good practice is to keep mold and mildew away from the cabin with desiccant bag (astringent) which will absorb any lingering moisture. These commercially sold compounds are widely available from a variety of sources, but charcoal briquettes will also

work well to absorb moisture. Whichever moisture absorbent you use can be hidden under the seats and in the trunk where they are easily replaced, but out of sight. If the carpeting is damp, it won't be long before the smell of mold and other unsavory odors fill the cabin of an unused classic. To remove bad odors, not just cover them with a sweet scent, good results can often be obtained by sprinkling baking soda lightly over the floor, brushed into the carpeting, left overnight and then vacuumed thoroughly.



© Marekusz | Dreamstime.com - Water Pump For Internal Combustion Engine Photo

The only mass produced car with an air cooled engine made in the USA was the Corvair, any other classic or collector automobile manufactured here will have water cooling. When driving your vintage muscle car make certain the engine does not over heat, keep an eye on the temperature gauge, any rise above normal should be addressed immediately. The coolant is in a pressurized system, making it a danger to remove the radiator cap anytime the engine is at operating temperature, but when overheated, the pressure will rise proportionally, as does the scalding danger. Even a minor overheating incident can shorten the life of the head gasket, which seals the head to the block, but if the temperature rises too far, an engine can seize up entirely.

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The coolant level in the radiator should always be kept to the top, the liquid should not be rust colored. The fan belt must be crack free and adjusted tightly enough to turn the fan as well as keep the water pump turning, plus other important functions. The hoses connecting the cooling system should be crack free and without leaks at the junction points; not only on the block, at the water pump and at the radiator, but also where they pass through the firewall to empower the heater and defogger. The coolant used should also conform to the manufacturer's specifications and be replaced at regular intervals to maintain optimum operation. Some later models will also be equipped with a transmission and/or an oil cooler which will also demand attention on a regular basis. A high performance muscle car may have both a transmission cooler and an oil cooler as original equipment or supplied by an aftermarket manufacturer.

Grease Nipples - Drive Chain

The most common way to start a discussion on lubrication would be with engine oil, but for a collector muscle car, a lubrication

job would make a timelier introduction on this topic. The “lub” job is done via the grease nipples, using a grease gun, and is a very important, but easily overlooked maintenance item, with our modern, low maintenance, start and go automobile technology. Cars made before the 50’s could have fifty or more places that needed to be greased as often as every 500 miles in some of the oldest vehicles. Any car made before the mid 1980’s or so will have some grease nipples to lubricate regularly, possibly around 20, as little as twice a year is a commonly recommended frequency, but following the manufacturers recommendations is the best advice. They are accessed from the underside of the vehicle and would have normally be tended to when the car is on a hoist, having an oil change.

© Amnachphoto | Dreamstime.com - Grease Nipple Texture Background, Spherical Joints. Photo

For a good number of American muscle cars, if not all, the grease nipples can be reached with the vehicle on the ground (buy a creeper), provided there is enough clearance. The grease lubricates the steering and suspension plus other important components and is needed to extend their life as long as possible. The drivers or the shop manual will have all the lubrication points for your vehicle itemized to make certain none are missed. Each sealed fitting must be inspected for leaks when it is filled with grease.

The owners manual is a must have for your collector car and most likely readily available from a well-equipped supplier, if your collector car does not have one. These reproduction copies contain piles of information on the operation and maintenance of your car, including recommended service times. The reproduction copies are identical to the original and will fit in the glove box for quick reference anytime specs are needed. If you do not have a booklet, the public library in your town may be able to come up with an

original copy for you to duplicate needed pages. The back pages of this booklet will have devoted space for recording the services done at specified mileages. These recommendations should be followed and recorded with dates plus other particulars for reference later.

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Engine oil should be changed regularly, often and by time on a vehicle that is not driven very far or infrequently. The viscosity or "weight" of an engine oil should be the same as recommended by

the manufacturer. An engine oil may be straight 30", "10-30", "10-50" or any number of other combinations, and these figures refer to the oils density at different operating temperatures. There are synthetic oils available now and may be an option for some people, but others prefer the traditional oils. I will not enter the debate over which one is the best choice for a collector car, but I would like to say that the two should not be mixed.

© Norgal | Dreamstime.com – Engine Oil Cap Photo

The standard transmission and differential normally share the same type of heavy weight gear oil; this oil will become dirty or

corrupted over time, making it necessary to replace it periodically. The inspection plates of both units can be removed to drain old fluid, but the gaskets should be inspected and replaced if needed, before replacing the cover. We all know about checking automatic transmission fluid, but on the level, a standard transmission is almost maintenance free although the heavy weight lubrication oil should be kept full. The vehicle must be sitting level to properly check the fluid. If you need to top up the standard transmission oil, then a leaky gasket could be suspected and should be repaired as soon as possible to avoid problems later on. Most rear wheel drive standard transmissions have an inspection plug located on the side of the transmission housing on the driver's side to easily check the level. Remove the correct plug and the level can be checked with your figure or a screw driver. Do not try to remove the fluid inspection plug until you are certain where it is located - if you remove the wrong bolt on the transmission, the complete assembly may have to be removed to repair the damage that could be done. Lubrication make-up may vary somewhat between manufacturers, the viscosity of the oil should be the

recommended one, but a heavy weight gear oil of some sort is used in a standard transmission. The fluid should just reach the top of the inspection hole, almost to the point of dripping out, as a rule of thumb for adequate lubrication.

The differential on your rear wheel drive muscle car also has an oil inspection plug. This plug is located on the back side of the rear end and is easy to find. It can be accessed from the underside between the rear wheels and at the back of the vehicle. With the car sitting level, remove the plug and insert your finger or a screw driver if you cannot see the gear oil inside. The top up can be done, but the reason for the low level must be sourced. A leak from the enclosed live axle would result in gear oil on the wheel rim, although may only be visible from the inner side of the wheel. Refer to the shop manual for systematic checks and a repair procedure.

Upgrades, Variations and Ethanol

Upgrades and variations from stock equipment can be a good thing, but the key to maintain a classic vehicle’s value is to make no

changes that cannot be undone later. Sheet metal holes to accommodate scoops, sun roofs, speakers or any other permanent disfiguring will decrease the value of your car if they are not to accommodate original factory equipment. Upholstery done in a style that is obviously not original, non-traditional (factory) color paint, or a super mind blasting aftermarket stereo are given a thumbs down by most car clubs and enthusiasts alike. Putting a non-stock engine or changing other major drive chain component in a collector muscle car is also a poor investment idea. Factory correct or exactly as purchased from the dealer show room is very desirable in almost every car. There are exceptions, of course. Clubs all over the country are devoted to the wonderful hobby of creating Hot Rods, Rat Rods and custom road machinery. They have existed almost as long as automobiles. Unique cars are a testimony to ingenuity and self-expression, but they do not hold the same value as a numbers matching, original restored muscle cars do.

There are some changes that may be a good thing, such as safety and performance items, but even then the original equipment parts should be kept with the classic to restore original function at a later date if required, by another enthusiast. Changes that could enhance a classic vehicle include upgraded braking, better tuned suspension, more efficient cooling and a higher tech ignition system, but make certain to keep all the retro stuff. Consider having a ghetto blaster in the back seat if you want to play music, or mount any electronic devices you need into a console that could be removed later is another option. Customized vehicles may not be eligible for insurance and licensing breaks that are offered in many jurisdictions for original equipment restorations. These benefits can

amount to thousands of dollars in savings for a MCF each year in some areas of the country.

Ethanol is commonly found these days as an additive to gasoline and done for a number of purposes. It is made from corn or grain and has a higher oxygen content than gasoline which equates to lower exhaust emissions of carbon monoxide gas. The Ethanol is a key ingredient in “dry gas” or other products that removes naturally occurring water molecules which are present in fossil fuels. The additive will absorb moisture in fuel, which kicks gasoline’s octane rating up three points. If you are in a cold climate, ethanol can also act as a gasoline anti-freeze. For all the above reasons an Ethanol blend is a "greener" alternative than gasoline and a likely choice for a modern automobile engine, which is developed for the purpose. So, ethanol - “Is it good for my classic collector car?” is the question I will address now.

© Paul65516 | Dreamstime.com – Hot Rod Photo

The ethanol does not create a problem for an engine in the short term, but it will separate from the gasoline and when it does, serious damage can occur to vintage fuel delivery systems. The Ethanol blend does not have the long life as regular unleaded gas does, which is 30 to 90 days maximum, while gasoline that has been treated with a fuel stabilizer will last up to a year or even longer. Any engine that is only used occasionally including lawn mowers, boats and a classic automobile will last longer running on ordinary gasoline rather than a Methanol blended fuel. If you do use

a gasoline with ethanol added - make certain you burn that tank of fuel in a short period of time.

Long Term Storage

Machinery will work best if it is used regularly and your classic muscle car is no different. A short drive, monthly and weekly start-ups may be adequate for winter months in a cold climate, but more frequent use will help keep your car performing at its best. Regular use will help ensure all parts are lubricated and will also help to keep you on top of any pending maintenance needs. A vintage muscle car must be cared for more thoroughly than a newer car. All fluid levels, belts, and hoses should be checked regularly, routinely and often. Special arrangements are required if you plan on storing a classic for a few months or longer to minimize issues when the car is used again.

© Norgal | Dreamstime.com - Engine Oil Cap Photo

When parking the car for a long period - use a **fuel stabilizer** to keep gasoline from oxidizing or turning to lacquer, then clogging the carburetor fuel jets and even delivery lines. Stagnant gasoline will begin to deteriorate in as little as two months. Difficulty starting a classic vehicle after storage can be a very common problem. You can save a headache when the warm weather arrives by taking an important step before hand and treat your fuel. Use a good quality stabilizer which is available from any good auto supply outlet and make certain to use the recommended ratio. Add the stabilizer to a low tank just before filling, then drive the car for a few

minutes to mix the additive. Keep the gas tank full to minimize evaporation and with the stabilizer you should be good to go. Regular oil changes will **protect the engine** and help prevent sludge build up and minor corrosion**.** The oil changes should be done by time and not mileage as well. This is very important for any car, but in particular a vehicle that is not driven regularly, to get maximum benefit from the oil. A 12 Volt fluid pump can be used to extract oil and other fluids making this job easy to do at home and less messy as well. There are also grease nipples for the drive linkages, suspension and steering mechanisms that need to be topped up with grease and checked for leakage regularly. Cars made into the early 1950's could have more than 50 lubrication nipples, but as sealed assemblies begin to appear, the service points begin to steadily lessen until we arrive at today's maintenance free, start and go technology.

Even when you are driving a car regularly the **battery needs preventive maintenance** to prolong its life. Make regular checks of the battery fluid level and top up with cool, neutral PH water, if it is

not a sealed unit. Do not leave the battery hooked up during storage periods and a good way to do this is to have, and use, a battery disconnect on the positive terminal. There are a variety of methods that work well to isolate the battery for preventing voltage loss and, as a by-product, they are also an excellent theft deterrent. One method would be a brass coupling to connect the positive cable to the battery. This connector has a removable brass bolt, which can be quickly taken off, cutting out battery power until it is replaced. Another style is a toggle switch hidden in a spot only you know about, the car will turn over, but it will not start until the switch is turned on. This switch interrupts the power from the coil to the distributor and is not easily found.

Protecting the finish is important and a cotton cover is a good way to keep bird poop, dust and dings away from the paint. Cotton is breathable and will be a positive measure to help keep condensation/moisture at bay, but still offers a good protective cover.

The interior of a stored vehicle can be subject to **mold infestations**that breed in damp environments, along with rot. Both conditions leave the cars cabin with an unsavory smell. Charcoal briquettes can be very good at absorbing moisture (astringent), or there are many varieties of desiccant bags or moisture absorbing products sold to put in the cabin and trunk of your classic to help solve the problem. Baking soda spread around carpeting and left for twenty-four hours before vacuuming could help remove bad odors too.

Breakdown of the 25 Best Muscle Cars to Own (AMC)

Introduction

This review is limited to a few of the more commonly found cars that could still be well within reach of anyone with a passion for owning a muscle car. Any of the cars listed can be found readily,

now, in 2015, in driving condition, for under $20,000. Many can be found for half that and even less, with a more thorough search. Having an adequate supply of cash is important when you refurbish a vehicle, but you can save a lot of money if you are flexible when you decide to begin searching for the right unit to restore. You may have a preference among the big three companies, want a specific model, certain year, or power option; all can be found at a price; if you have the time and resources. There are almost unlimited number of makes and models that could be very tempting projects, but for many of those, even if the purchase price is jaw dropping low, the bottom line could be out of reach for many muscle car fans.

Two of the most important features when finding a good project car:

✓ The car should be as rust free as possible

✓ The frame should not have any serious damage

Both of these things can be easily checked on a likely prospect vehicle in a few well spent minutes. Look very closely throughout the cabin and trunk in all the corners, under the carpet

or matting plus under the hood. Also in, around and under-side (inside wheel wells) of the exterior of the car with some diligence. The Muscle Car Fan Network has written this book to help a novice become a modestly informed buyer. The intention is to find a car that can give you many years of pleasure and is within the reach of most budgets. Finding a suitable unit to restore can be a time consuming task for anyone. This list that MCF has compiled for you, will help you make the finding of the right car at the right price a chore.

Chevrolet internal links:

Chevrolet Small block engines 1954 - 1998

Chevrolet Big Blocks W series

Chrysler internal link:

Chrysler Hemi Power - Hemispherical by design

American Motors Corporation

Automobiles manufactured by AMC seem to offer more in the way of safety and all other progressive technology with a lower sticker price to boot than any of its competitors. Whether it was creature comfort or mechanical advancements, this little company was often a year or more ahead of the other, larger, big three American manufacturers. The Javelin AMX is a two seated GT style muscle car manufactured from 1966 until 1970. Any year is very collectible, but the 1968 and `69 models are the most sought after.

The long list of fan clubs and aftermarket parts suppliers just keeps growing. Many original looking reproduction parts are being made by a few aftermarket manufacturers. AMC used many diverse components, that could have originally be purchased by the companies like Ford, GM or even Chrysler. This can make finding the correct parts needed to restore the drive chain, window and door mechanisms a reasonably priced off the shelf item or a recycled one may also be around if you look in the right place.

© Swtrekker | Dreamstime.com - Javelin/AMX Cars At The Woodward Dream Cruise Photo

The first generation Javelin is a top choice AMC muscle car to collect, but the next generation models from 1971 until '74, with the added rear seating, are a good option, with a lower cash outlay for the vehicle initially. The 390 cu in V8 engine with the `Go Pack` is the most coveted, but any power option, including the entry level 290 cu in (4.75 L) V8 is desirable. The car is heavier than G1 versions, at 3,244 lbs (1,471 kg) curb weight and sitting on a one

inch longer wheel base, now at 110 "(2,794 mm). The ad campaigns in '71 touted the G2 Javelin as a futuristic 80's car available now and had some features to back up the claim. In 1972 AMC introduced an unheard of "Buyer Protection Program" which gives their customers unlimited protection for one year or 12,000 miles (19,312 km) on everything but tires. The guarantee came with a toll free telephone number direct to AMC customer service, a free tow and a complementary loaner vehicle if the problem could not be remedied quickly.

© Mauriehill | Dreamstime.com - Motorsport 1973 AMC Javelin AMX Photo

For G2 the AMX versions offer the most powerful options for the Javelin. The horse power ratings are now the more accurate SAE rating system for '71 and list the "gross" hp that year, but '72 and newer, list the "net" figure. The actual hp remains the same, although the numbers may appear to contradict each other. A 1971 Javelin AMX, assembly line equipped with the 401 cu in (6.6 Liter) V8 coupled to the four speed can turn in 14 second times consistently on a quarter mile track using unleaded, low octane gasoline. There were two six cylinder engines and four V8's available, which could be bolted to either one of two standard transmissions or the base three speed automatic, but the "Torque Command" high performance automatic was also on the table. The four speed high performance standard transmission is the T-10, crafted by Borg-Warner. The Javelin is not difficult to restore, but a well done unit will fetch premium price when completed, which is an added bonus. Correct and original restoration is a holy grail to a large segment of avid collectors. The EPA mandated pollution control equipment that people were discarding in the 70's, such as catalytic converters are now sought, when accessories enthusiasts

need a project car to look and perform as it did when it left the assembly plant.

Related:

AMC Javelin SST 1968 - 1970

Breakdown of the 25 Best Muscle Cars to Own (Chrysler)

Chrysler Corporation

The Chrysler 300L

The 300 “letter series” Chrysler products, began production in 1955 with the “300C” and then the “300B” in ’56, but then move in a forward direction through the alphabet until the last of the series, the “300L” is produced in 1965. This car is sleek and modern looking when compared to the previous offerings in the line. There are others that claim the title, but these cars are definitely the beginnings of the true muscle car era for Chrysler. The 300L comes

with a four barrel carburetor on a 413 cu in (6.6 L) V8 developing 360 bhp at 4,800 rpm. This engine also puts out 470 ft-lb of torque at 3,200 rpm. The specs are the same with either the three speed automatic or a four speed standard transmission. This series was produced with creature comfort in mind, the complete line is tasteful, but plush, with all available technology built in and, as is Chrysler tradition, they do perform admirably and hint strongly of what is to come. There were only 2,845, including 440 convertibles, of this Chrysler to leave the assembly floor in 1965. This could be the cheapest of the vintage numbered Chrysler models. The 300L is an easy to restore vehicle. The 300L will cost about the same to renew as other upscale Chrysler models like the Fury or Imperial but the 300L could be found at a much lower initial cost. The Chrysler 300L could have been purchased for around $4,090.00 for a hard top and $565.00 extra would cover the convertible in '65. These cars are engineered well and mechanically sound ensuring there will always be a demand for them and they will always carry a resale price to reflect that fact.

Dodge Charger

High performance luxury takes a turn for the better with the introduction of the Dodge Charger. This very well styled vehicle is on the Chrysler mid-sized “B” body, and produced from 1966 until 1978. The new Charger shares its platform and forward sheet metal with the mid-sized Coronet. The 1965 Dodge Charger II, with its sweeping rear window, bears an uncanny resemblance to a competitors new model, the AMC Rambler Marlin, when they were unveiled about the same time. Still, the G1 Charger is a unique, a well-appointed, classy muscle car, that could double as practical, with a back seat that folds down for camping or cargo. The power and performance would wait until '68 to '70 and achieve a world class milestone for the Charger G2.

Two or even all three of the G2 years are top contenders for one of the best muscle cars of all time in anyone's books. All Charger years are going up in value, some very rapidly these days with the G1 and G2 cars commanding the highest price, likely makes them inappropriate for this list. If you do find a good solid unit to restore, from any year, it would be an excellent project car. I would suggest buying it now rather than later. It will be cheaper. A few steps beyond good looking, the Charger is responsive, fast and sleek with any part you need readily available to keep you mobile 24/7; any Charger is a perfect muscle car to own. Dodge turned out

more than 244,000 units during the G2 three year production run. There are also many thousands of newer G3 project cars out there needing a new home, but as you may also expect, your initial investment cost will increase proportionally to the engines displacement. You cannot go far wrong with a well restored “B” platform Charger from any of the first three generations no matter what sized engine is under the hood or year you decide to take home. The G4 is the last four years of production, as the muscle car era winds down. The Charger is not so sleek now, more squared up, bulkier, with safer, but heavy, impact absorbing bumpers. These last years the emphasis is more on personal luxury, as manufacturers and their designers regroup. The last Chargers still have some get up and go, with the lowest initial price tag for a project car, although the steadily decreasing production numbers equate to a more limited availability.

Related:

Dodge Charger Daytona 1969

1969 Dodge Charger Daytona 2

The Dodge Challenger

The first time the moniker, Challenger appears for Dodge under the Chrysler brand is for the 1955 and 56 model year as the “Dodge Silver Challenger”, which is not a sought after vehicle by muscle car fans. It bears little resemblance to the first generation Challenger, but under the hood of this luxury car is one of the last versions in a long line of the original hemi engines, The “Red Ram” hemispherical engine design will be revamped and

returned somewhat more refined in the mid 60's with dramatically improved performance, under the now Patented "hemi" name.

The G1 Dodge Challenger was in production from 1969 through 1974 with 165,437 units rolling off the assembly line in that time. The Challenger is on the same platform as the Charger. They have similar body lines, but the Challenger is more lavishly appointed with almost every power combination in the Chrysler arsenal available. The trim and options available from the manufacturer are huge to compete with the Cougar and other luxury muscle. Mopar fans prefer the Charger and the 'Cuda, which makes the Challenger the lowest initial cost Chrysler "E" platform car you will find. Newly manufactured body parts and paneling are widely available like its platform mates. The smaller the V8 under the hood, the lower the initial cost outlay is likely to be. Remember that most muscle cars will fetch the highest resale price, provided they are restored as close to factory specifications as possible and the Challenger is a case in point.

Plymouth Barracuda

The Plymouth Barracuda was manufactured by the Chrysler Corporation, in three generations, from 1964 until 1974. The release of the first Barracuda, as a fastback, on April 1st 1964, predates the Mustang's release by two weeks. The fastback is appealing, but a little plain looking beside the flashy Mustang which will take the lion's share of sales away from all the competition, for a long time to come. It is ironic, that the first entry into the yet to be "Pony Class", has made its debut before the class is created.

© Raytags | Dreamstime.com – Plymouth Hemi Cuda Convertible Photo

The new Barracuda has a unique and very large, 14.4 square foot, fastback rear window that wraps around each side. It reaches from the “B” pillar away back on the rear deck, giving the driver an extremely wide field of vision to the rear. The ’64 model is the only year that might have the optional “Torqueflight” automatic transmission controlled by dash mounted buttons. The ’64 Barracuda is available with a number of power options, but the largest engine is the new 273 cu in (4.5 L) V8 mounted with a two barrel, providing 180 bhp (130 kW). The power options increase each year, but in’65 it is still the same V8 engine, now with higher compression, hotter camshaft and other performance features, including a four barrel. This knocks the output up to 235 bhp (175 kW). A sport suspension is also available in ’65 and you could order gauges for the newly styled dash and the options also include a tachometer. All the performance goodies, including larger rims with fat tires and disc brakes plus all the appropriate badging and trim would be on the more uptown Formula S “package in ‘65. Creature comforts are also increasing, with added AC to the options list, part way through ’65. For the ’66 model, a console could be ordered and

the renewed dashboard has space to fit the tach. The exterior has revised sheet metal, the grill has been revised and the logo of a slender fish added to it, while the most uptown (Deluxe) model sports the signal indicators on top of the fenders.

The G2 begins in 1967 and the sheet metal has been revised and is now Barracuda, moving further away from the Valiant roots, but is still on the same platform, although now with a longer, 108 inch (2,743 mm), wheel base. The body styles are a convertible, a fastback and a notchback hardtop is another choice. In the 1968 model, there were around 50 Barracuda units equipped with the 426 cu in (7.0 L) engine, built for Super Stock Class racing and can do a standing quarter mile in 15 seconds. Hurst Performance assembled these cars and they were not meant to be used on public roads. The last year of G2 is 1969 and the first year the name "'Cuda" is applied.

© Raytags | Dreamstime.com – 1971 Cuda Front Grill Photo

Beginning in 1970, the third generation Barracuda has broken all ties with Valiant and the all new ‘Cuda is not an economy car any longer. The fastback has been scraped, so this year, a convertible and the coupe are the only choices.These might well be the most valued collector muscle car line on this list. The models built from 1970 to 1974, with the modified “E” platform will command the highest price any time. A convertible 1971 Hemi unit, coupled to a four speed, changed hands, in June 2014 for over 3.5 million US dollars at Seattle’s Mecum auction. This “Cuda“ is one of the 13

convertibles to leave the assembly line in ‘71 coupled to a four speed.

The restoration of the Barracuda will be easier as time goes by with a complete roster of newly manufactured parts now available or coming on line in the near future, including factory correct upholstery. All the items you may need are coming from an ever growing list of sources along with a large support network of Mopar clubs spanning the continent to help with the details you may need for a first class restoration. The fastback versions are the most coveted of the first two generations, but the demand for any body style is growing as time passes, making any Barracuda project car a good solid investment when returned to factory specifications.

Related:

Plymouth ‘Cuda 1970 and 1971 Big Muscle

Plymouth Barracuda 1970 and 1971

1970 Plymouth Hemi Barracuda

Early Muscle to the 1970 Plymouth Superbird

Muscle Car Classic: 1970s Plymouth Hemi ‘Cuda

Plymouth Duster (5 images are a 1972 model)

Plymouth Duster was manufactured from 1970 until 1976 in the USA, competing with the Valiant, the Maverick and the Nova for its share of the compact market. This car is well worthy of being in a classic collector's possession and it has a large following to proof that fact. The name "Duster" is also used by Chrysler in other markets and manufactured outside the USA.

The USA made Duster is on the same platform as the Valiant and during the first year only, it displays the Valiant logo. This Duster was produced in large numbers and is the most likely Mopar product to find at a lower price, but it is only available as a sporty looking two door coupe. This coupe could be outfitted with a number of interior layouts and power variations to choose from, during its manufacturing run. Names of these variations include Feather Duster, Space Duster, Gold Duster, Duster Twister, and 360 Duster among others. The idea is to appeal to many specific market segments covering the needs of many types of customers, and as the name implies, the variation would hold cargo, be economic, or deliver high performance. The Gold Duster is a more

lavishly appointed option and could be ordered with a 340 cu in (5.6 L) V8 in 1970. This first year was a big success for the Duster with 217,192 units sold, but only 24,817 are equipped with the 340.

Little changes for the Duster in 1971 other than Valiant logo's and the Plymouth script are no longer there. The Duster Twister trim package is an offer in 1971, giving the owner high back bucket seats, side stripes like the 340 versions, matte finish hood, shark tooth grill, decorative hood scoops, rear spoiler and finished up with dual exhaust. The breaker less ignition system is basic equipment for the performance oriented 340 in 1972. The biggest visible change is surface mounted marker lights and the tail lights are now larger and of a one piece design. The Feather Duster is featured

in 1973 and is lighter than other offerings by 187 lbs. or 84.8 kg, This is achieved by integrating a number of aluminum components to successfully offer the best fuel economy in its class. The Space Duster in 1973, features a fold down rear seat back for increased storage capacity and also have a security cover to keep things out of sight.

For 1973 the body is refreshed with a newly design hood, revamped front fenders, upgraded bumpers and a chrome bezel to outline the tail lights. Any Duster from now on will have an electronic ignition as basic equipment, as is the grid style electric operated rear defogger. The Duster will stay almost the same until the last ones roll off the line in 1976. Any ’73 Duster equipped with

disc brakes will most likely have five lug nuts to mount the wheel, on a 4 ½ inch bolt pattern. All 340 engines, also a few 318 powered units use a simplified 8 ¼ inch axle assembly, with the wheel bearing sitting directly on the axle shaft. With this arrangement end play is taken up by a “C” clip. Lesser models will use drum brakes with five bolts to hold each wheel, but these have a 4 inch pattern. Front wheels have big wheel bearings to accommodate the large diameter spindles on all units.

The muscle car era is coming to a close by 1974 with more stringent emission control regulations coming into effect, but Plymouth puts out a Duster powered by a 360 cu in engine that meets the EPA criteria. This Duster comes with stripping, dual

exhaust, power disc brakes all around, heavy duty suspension, better shock absorbers, a sway bar and power to the axles is through the 8 ¼ inch differential. For 1975 the 360 avoids using a catalytic converter by installing a secondary air injection system, also known as a smog pump. The last year of Duster production is 1966 and these units are equipped with a foot operated emergency brake and the rear view mirror is now mounted on the windshield rather than the old school double-pivot ceiling bracket. Disc brakes are standard fare for all cars made after January 1976.

Breakdown of the 25 Best Muscle Cars to Own (Ford)

Ford Motor Company

Model "A"

Do you have a creative streak? Do you want a muscle car that you will see nowhere else? Ford's Model A could be a perfect car to

fill your needs. Fiber glass is not a difficult medium to work with and is a great way to customize your own unique ride. Hot Rods or Rat rods have been a passion for a dedicated group of MCF enthusiasts since the 1930's and the Model A is the car many have chosen in the past, partly because of the availability. This car is simply made and can be modified to accept a wide variety of engines and drive chain combinations from most current manufacturers. The suspension can be upgraded as can the brakes to disc's all around, giving you a smooth ride, good handling, and power to spare with the ability to stop 21st century style. The interior could be as plush or plain as you like and all the modern electronics including touch screen can be added.

© Paul65516 | Dreamstime.com - Hot Rod Photo

The Model “A” Ford was produced from 1929 till March 1932 and is the first car to use safety glass as basic equipment. During its production run more than 4.8 million were produced in 9 body styles. The coupe is a basic model and could be bought as; a roadster, the business coupe, or sport coupe in standard or deluxe versions. The Cabriolet and sedan models could be purchased with convertible tops. A Town Car, The Phaeton, a Tudor sedan, The Victoria, a station wagon and a pick-up truck were all manufactured in the three year production period.

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There are so many of these cars still around. Some have been restored multiple times over the 8 or 9 previous decades - many frames can still be found in original, but restorable condition. Every single piece to fit this automobile is now in production, including body panels, by a number of aftermarket manufacturers and widely available through retailers coast to coast. If this is the way you want to go with a restoration, make certain the parts you chose are the highest quality, poorly made knock off panels are there. These cars can occasionally be found at a very pleasing price.The support network is in place to bring your project to completion with hundreds of clubs throughout the USA.

Ford Mustang

John Najjar is credited with naming the Mustang after the F-51 Mustang a WW II fighter plane, he and Phillip Clark, are jointly responsible for designing the Mustang I concept car. This prototype was seen by the public at the United States Grand Prix in Watkins Glen, New York on October 07, 1962. The car was driven by

Formula 1 race driver, Dan Gurney. The Mustang I turned in lap times not far short of the F1 racers. Ford Co. unveiled the Mustang II prototype in the beginning of 1963, testing the markets for the new sports car. This first Mustang has room for two. The car that is in the showrooms by April 17, 1964, but reverts to the Mustang I and will seat four, but its cabin is 2 ½ inches shorter than the concept car displayed the previous year. This new car's undercarriage is similar to the compact Falcon's frame and they also share many components.

1965 Mustang

The Mustang is the most successful automobile that Ford has built, since the model “A” and like that early success, every piece you could possibly need is available from a broad range of suppliers. The Mustang is an easy car to restore. Also it's not difficult to find the one you like best, from the millions produced during the last 51 years. Some years are better than others and there is a large number of stock variations, both mechanical and cosmetic, that can be integrated into your restoration to make it more desirable. The 289 V8 is the most sought after engine and it could have either be the high performance “K” code or the “C” code with a four barrel carburetor, but the Rally Pac is also a choice performance accessory. The Mustang has always been available with a long list of optional accessories. Items such as AC or a console are perfect additions to enhance comfort, convenience and appeal. There is a highly desirable interior trim option featuring “pony car” upholstery-horses embossed into the fabric, plus rear seat armrest, uptown dashboard and added trim complete this

package. The Mustang kept getting larger and heavier until the ’74 model year, when downsizing the Mustang to its roots. This is how Ford manages to save the model from suffering the same fate as most other high powered muscle cars.

1984 Mustang

The earlier Mustang is prone to rust quickly, but with proper care there's no need to worry about that, but proper care could include heated storage in some areas of this country. Should you

be looking for an older Mustang, of any year or a specific model, you will want to be certain you are able to separate the Stallions from a bunch of old nags.

Related see Pontiac Firebird:

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Happy Birthday Mustang 1964½ to 2014

Ford Falcon

The compact Ford Falcon was produced from 1960 until 1970 in three generations and from the start outsold all the competition in its class, offering an almost full roster of models, including the Falcon Ranchero. There would be no convertible until ’63. The Falcon is functional but plain and a perfect car to fill the needs of a multitude of budget minded consumers.

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The Falcon has a unitized body and dominates the domestic compact market for the first half of the 60's, making it fairly easy and moderately inexpensive to find a suitable project car. Midway through 1963 a V8 engine could be under the hood of a Falcon and '63 is finally the year when a convertible could be optioned. The G2 Falcons are still compacts, but much more stylish than the G1 and power options are widely expanded in 1964, with three six cylinder engines and three V8 power plants on the table. The engine could be bolted to a choice from two automatic or two standard transmissions. The light weight Falcon will move out very well

driven by either the 302 cu in (4.9 L) or the 289 cu in (4.7 L) V8's when coupled to the four speed. The sales of the practical Falcon began to drop towards the mid 1960's, partly due to the Mustang's strong appeal. The majority of consumers at the time are opting for elegance over economy.

The decline in sales plus the car's inability to meet the increasingly strict safety regulations meant the writing is on the wall for the Falcon. A 1966 Falcon was used in the Trans-Am series that year and sports the newly revised square taillights.

All Ford products are equipped with a locking steering column

in 1967, except the Falcon, but it does get a dash mounted seat belt warning light. The Ranchero and wagon are moved to the Fairlane platform in 1967. The end of the G3 is 1969, although the 1970 models were in showrooms, they are identical to the ’69 versions.

The Falcon was replaced by the Maverick for 1970, although the Falcon name plate lived on for a short time in 1970 as a Fairlane based mid-size model. This Falcon version is not luxurious and offered a limited number of convenience options, but any power

train for the Fairlane or Torino could be chosen for this seldom seen 1970 ½ variation - including the 429 Cobra Jet engine.

Related - Mustang:

Ford Ranchero Falcon 1960 - ’65 to Ranchero Fairlane 1966 - 1967

Mercury Cougar

The Mercury Cougar was introduced to the public in 1967 and acknowledged by Motor Trend Magazine as the car of the year. The uptown muscle car has power to spare with head turning style. Approaching you, it looks exotic and tough, displaying a distinctive front grill with vertical bars, the headlights hidden from view, or stare at the full width sequential rear turn signals as the new Cougar slips out of sight, exhaust rumbling. The first three years, the luxurious Cougar is offered as a two door coupe or as a two door convertible, but only the first generation has hidden headlights.

A number of V8 engines are offered in ‘67, but even the entry level 289 (4.7 L) Windsor V8 can have the GT performance package. The XR-7 is top of the line with leather seats, competition instruments set in the wood grain dash, toggle switches and an overhead console with a 390 under the hood. If the Merc-O-Matic transmission is optioned, it is mounted on the floor with the sporty ”T” shift grip. The 427 cu in (7.0 L) is available in 1968.

By 1970 model year, five smaller V8 engines are on the table, beside the 428 or a 427 (both 7.0 Liter) power options. There are a large number of normal comfort options such as power seats, but the two unusual items are: a tilt steering wheel that will swing up, to

one side, out of the way when the ignition is turned off, and the rarely ordered factory installed electric sun roof. The Cougar is a pony car that has muscle for the first seven years, but as early as 1970, the car begins to drift towards becoming a personal luxury car. The G2 Cougar for ‘71 is one inch longer and now on an intermediate platform. The two hidden headlights have disappeared entirely, replaced by a four light configuration. The 1974 Cougar is revamped model is now a personal luxury car and on the same platform as the Mercury Montego or Ford’s Torino. This is one of the few cars to upsize when most models are going the other way. The Cougar is now on a 114 inch wheel base, completing the transition from pony car to a junior Thunderbird according to some.

The Cougar for 1977 and the fourth generation, has few power changes, but is now the only car on the intermediate platform. The Montego was cut from the roster and any other intermediate sized cars are rebadged as Cougar. There is a full range of Cougar body styles now, and only for this year, a Cougar woody wagon is offered. All the parts you need are moderately easy to acquire including chrome trim strips and complete interior, factory correct, delivered to your door. Many parts, including engines and other power accessories are interchangeable with the Mustang and Falcon. The earlier 1967 or 68 models are held in the highest esteem, but later models, particularly convertibles, up to 1973 are moderately easy to come by with a large support network in place, are also likely prospects for restoration. Take good care to find a unit with a straight/solid frame, one that has not been driven as commuter vehicle through multiple northeastern winters, which would be a bad choice, but otherwise, any G1 to G3 Cougar is a keeper if the price is right. The EPA increases the strangle hold on high powered vehicles and high insurance rates on muscle cars, forcing the big three US manufacturers to put them on the

back burner for a few years. Dearborn, Michigan initially assembled the all Cougar muscle cars in 1967 and did so continuously until ’73, but the San Jose Assembly plant in Milpitas, California, helped to step up production, from ’68 until early ’69. The Personal Luxury Cars, from ’74 are assembled in Lorain Idaho covers the generations we have highlighted up till now.

Related - see Mustang:

Mercury Cougar - First Generation 1967 to 1970

Ford Thunderbird

The Ford Thunderbird has been produced in eleven generations spanning 50 years, from 1955 until 2005, and all are dependable, desirable and collectable. The first five generations are the biggest interest to classic MCF for now. The first generation, from 1955 through ’57, is a two seated sports car. If you can afford one of the first generations, the port hole rear side windows are coveted as is a continental kit sitting on the rear bumper to hold the spare tire. There is also a removable hard top version if you can

find one and like a convertible without a canvas roof. I am not certain how many survived, but 21,380 units were sold of the 1957 “T” bird. For a MCF that wants a high performance, but on a factory correct car, the 312 cu in (5.1 L) V8 mounted with either the two, four barrel Holly carburetors or the Paxton supercharger would be a dream come true. These are most desired and the price demanded confirms that fact. However, there are many places in the USA to pick up a G1 Thunderbird, this week, for under $10,000.00, but they will range up to the high five digits range or beyond for the rarest units at today’s prices. There are possibly some real bargains around as well if you want to take time to search.

First generation Thunderbird

The Thunderbird has a back seat in the G2, for 1958 and is now on a longer, 113 inch or 2,870 mm wheel base, adding almost two feet total length, but also puts on almost 1,000 lbs. (454 kg). The sales are going up progressively higher, each year for the next three years to a total of well over 210,000 units produced in G2. Motor Trend chose the Thunderbird as car of the year in 1958. The power option for ’58 is the new 352 cu in (5.0.L) FE V8 developing 300 hp (260 kW) and could be bolted to either the automatic or a three speed standard transmission. Power gets kicked up by 50 horses (37.9 kW) with the new 430 cu in (7.0 L) MEL V8 engine in 1959. The mechanical changes are small for the 1960 model, but an unusual option is the hand operated sun roof.

The 1961 Thunderbird has a complete face lift and is looking smooth and sleek in the parade and is the Indianapolis 500 pace car that year. Under the hood is the new 390 cu in (6.4 L) FE V8 putting out 300 hp (220 kW) to a three speed automatic transmission, initially the only offer in G3. The ’61 “T” bird will never go out of style. It is a very classy looking ride and there were 73,051 citizens which drove out of dealerships with a “T” bird that year. A very rare but nice, Sports Roadster Thunderbird option was available for the convertible in 1962, a paint matching fiberglass tonneau cover could be fitted over the rear seats, making it look like

a revival of the first generation two-seater. The roadster package also includes 48 spoke wire wheels designed by Kelsey-Hayes; Elvis Presley drove one of these. The same 390 as last year is basic, but if the M-code engine box was checked on the order sheet, the engine would have tri-power-three, two barrel carburetors bolted to the intake manifold allowing the engine to give out 340 hp (250 kW). Cosmetic changes and the charging is done by an alternator rather than a less efficient generator, are the only differences for 1963 models, as Ford prepares to introduce generation four in ’64.

Generation four has a complete makeover, the same 390 engine this year, will develop 300 hp ((220 kW) and is bolted to a three speed automatic transmission. Disc breaks in front, sequential turn signals and Ford's double sided key are all new for the 1965 model year. For 1966, in the final year of G4, the "T" bird is given a major cosmetic revision. The 390 is now putting out 315 hp (235 kW), but a real bargain for performance is to pay $86.00 more and upgrade to the new 428 cu in (7.0 L) V8 engine, offering 345 hp (257 kW), as many consumers of that time did.

The new 1967 and G5 Thunderbird model changes direction, Ford wants the "T" bird to be more of a luxury car, to distance it from the very popular and lower priced unibody Mustang. A major, but less visible change is: the unibody design is abandoned in favor of body-on-frame construction. The sporty look is still there, but the models now a personal luxury car, in closer alignment with the Lincoln, increasingly evident in 1968. More big changes are: no convertible on the roster, a four door with rear suicide doors is offered (through '71 only), and hidden headlights are in the grill. For the years 1970 and '71 a fast back and coupe are the only choices.

A marketing ploy in 1971 offers two “T” birds, a “his and hers”, @ 25,000.00 "per pair only". The G6 in 1972 is bigger and heavier but still could be an option for a MCF, but the Thunderbird remains a luxurious, reliable ride until the end in 2002..

Related see Mustang:

Ford Thunderbird 1957-1958

Thunderbird 1959 – 1961

Thunderbird 1962-1963

Ford Thunderbird 1964-1966

Ford Thunderbird generations 1955 and 1956

Breakdown of the 25 Best Muscle Cars to Own (General Motors – Buick)

General Motors Corporation

Buick Division Riviera

The statements: “Buick Division has always been in the lime light when compared to the top GM offering, Cadillac. A top of the line Buick is where the two meet, but Buick is more subtle and adds performance”, are both true if applied to the generations revealed here until the 90’s or thereabout. The Buick Division of GM has consistently produced luxurious vehicles, that are also high performance oriented and the Riviera from `63 to `65 is one of those. The Riviera is one of the best built and most well designed luxury automobiles of its time, living up to the reputation of being a very responsive, with smooth handling and agile automobile, with a fan club base that is still growing. Any Buick will be higher priced

than a Chevy or similar brands, but the car will also command a higher price on resale.

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1971 Riviera

There is a wide variety of basic items with a G2 Riviera including power steering and power brakes, but in ’63 the “Al-Fin”

brake drums finned with aluminum for cooling are fitted with 12” brake shoes are also included on all Rivieras. The steering wheel will give three and a half turns from lock to lock. The coil springs are slightly softer than on most Buicks, but the lighter Riviera stands out, offering a comfortable, firmly controlled ride. The standard Buick designed double wishbone in front; live axle located by trailing arms and a lateral track bar, with the roller centers raised, to reduce the body’s lean.

© Antonsokolov | Dreamstime.com - Buick Riviera 1972 Photo

1972 Riviera

The Riviera, as basic equipment, has a 401 cu in (6.6 L) V8 “Nailhead” engine, initially in ‘63, but later in the year a 425 cu in (7.0 L) version of the same V8 engine could be optioned. The production in '63 is limited to 40,000 vehicles, of which, 2,601 customers choose the 425 that year. Either engine was bolted to the continuously variable, twin turbine drive automatic transmission (CVT). Both the V8s have lowerback pressure with the basic equipment dual exhaust pipes. The entry level price in 1963 is $4,333.00 up to around $5,000.00 fully loaded. The Riviera can reach a top speed of 115 mph (185 km/h) and do a standing quarter mile in less than sixteen seconds. As it left the assembly line the Riviera will do 0-60 mph (97 km/h) in a little under eight seconds consistently.

Buick division, traditionally, has always limited production numbers, partially to have demand exceed availability. Many parts for the Riviera, including some body panels (some cases), interior

packages or engine enhancing upgrades are interchangeable, with other full size models, like the Toronado, Monte Carlo, Impala and Eldorado, also on the GM “E” platform. There were more than 1.1 million produced during the 35 year Riviera production run. Newly manufactured body panels, interior coverings and trim pieces are all there to find now, to a large degree, but will become even more available as time rolls on as a quality product, fitted with top drawer components will endure.

Related:

Buick Grand Sport 1965-1970

Buick GSX 1970-1974

Breakdown of the 25 Best Muscle Cars to Own (General Motors – Chevrolet)

Chevrolet Division

Bel-Air 1954 to 1957

The Chevrolet Bel Air name is used from 1950 until 1981 and in the beginning it is a premium trip level for all models, but by 1954 Bel-Air is the top model in the Chevy full size line up. In 1958 a power option, the Impala, would later become the nameplate for the full size line-up, delegating the Bel-Air to an entry level model. All years were produced in large quantities so an original condition project car may still be found while an older restoration can be turned up easily. The models produced from 1954 until 1957 are among the most highly collectable. Of these, the 1957 occupies top spot in most collectors' eyes, with the '55 and '56 a close second and third. Any 1957 Bel-Air, fully restored, can easily cost $30,000.00 and up, but even the '57 models can occasionally be

found in good condition, for around $15,000.00, or possibly much less, with a serious search.

1957 Bel-Air

The last year of the first generation Bel-Air is 1954 and basically equipped with the “Blue Flame” in line 235 cu in OHV engine putting out 106 hp bolted to the standard transmission with a column mounted, three speed shift stick or an automatic could be optioned too. The Powerglide transmission equipped models would develop 115 hp (86 kW) and this 235 has solid lifters with full pressure lubrication. The ’54 is valued more than earlier versions because the crank shaft bearings are modern style, but earlier engines have babbit bearings which have to be poured during engine assembly.

The G2 Bel-Air is available in a full range of body styles, including, the very collectable Chevy Nomad station wagon. Any of the ‘55 to ’57 Chevy Bel-Airs have strong eye appeal with classic styling, and all are very desirable. For the ’55 to ’56 model years there are two six cylinder engines and two V8 power options available from the factory. The smaller engines use the two speed Powerglide automatic while the V8 choices would be bolted to the 3 speed Turoglide, for the customers that do not want the basic three speed standard transmission. The largest engine for the first two years of G2 is the 265, but in 1957 the 283 (4.6 L) is available for your new Bel-Air.

Body panels and upholstery can be purchased off the shelf, in some cases, or special ordered with quick delivery from a number of aftermarket suppliers. Panels can be found identical to the originals or lighter weight fiberglass, aluminum or even carbon fiber are in production or can be special ordered.

Modern style disc brake kits are available to improve stopping ability and complete electrical upgrades to today's standards can be done. There is a large variety of factory correct power plants and drive chain options to choose from to get the performance, brand new, from the vast GM arsenal. Additionally, Interchangeable high performance aftermarket accessories are now in production to

make your restoration deliver a bit more than the original. There is also a pool of an ever shrinking supply of original parts still on dealers and collectors shelves.

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Chevrolet Camaro

The 1967 Camaro is on the GM compact car “F” platform, initially shared with the Nova, but the Camaro offers more; the lines of a sports car, modern styling and also practical. The Camaro is a perfect car to compete with Chevy’s rival, Ford and it's Mustang,

introduced on Fords similar compact platform two years earlier. The Camaro is a nice responsive car to drive, high performance and there are Chevy dealers located everywhere to help keep you mobile, making the Camaro a popular choice to restore.

The first three generations of the Camaro are all collectable, but the earlier G1 editions or a special performance package from almost any year, generally, will command the highest price. You can expect to pay upwards of $15,000.00 even for an older restoration, a newly refurbished G1 Camaro may fetch well over $100,000 in US funds for the most desirable models. There are low

priced Camaro's yet to find parked in garages or stored in a forgotten rural barn, but rare as finding that needle in the hay stack. You can do your homework thoroughly, exercise patience, finding the right Camaro project car at the right price is another way, but its tedious work.

The fact "Research is a key to a successful Camaro restoration." is true, but without doubt the best way to find a Camaro, in the near future, at a fair market price, is through a Camaro car club chapter located near you. On all the Camaro club sites, you will find an event calendar. Check this calendar for the

“When & Where’s” of upcoming meetings, drive byes or show and shine gatherings. Most clubs will likely also have week-end long parts swap rodeo in a party atmosphere, to show off, and sometimes sell their Camaro. The long gatherings will have loads of parts, including unusual hard to find stock goodies from vender booths. You will get the opportunity to talk to other MCF skillful back yard mechanics, body restorers, machinists and other MCF for advice or one of any number of professional specialists plying their trade. These events are held once or twice a year in all parts of our country and are a very relaxed, fun way to find peace of mind while acquiring a piece for your muscle car. All Camaro fans and owners are welcomed to visit and even partake in activities alongside the club member’s vehicles; all are these folks are Camaro MCF’s - any year or model could be around to admire and talk about.

The Camaro has been in constant production, aside from a five year hiatus between the G4 and G5 version, as of 2015. These late arrivals may also be an option, but they do not qualify as vintage or collector vehicles until they are either twenty or twenty five years old, by rule of thumb, for most jurisdictions. Many of these newer models, may however, be collectable, now, at a lower price, rather than an inflated one later, if you want to speculate.

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Camaro 1969 plus SCCA Racing and the COPO Version

Camaro RS / SS / Z28 options 1967 to 1969

Chevy Camaro 2011 to 2013

Chevy Camaro

CHEVY CAMARO conception-prototypes

Chevrolet Camaro 1967 to 2002

Chevrolet Chevelle

Three generations of the mid-sized Chevelle were assembled by GMC Chevrolet Division between 1964 and 1977; all of them classics, making any model a prospective keeper.

The Chevelle is one of the biggest successes that GMC and Chevrolet Division have ever marketed with millions manufactured in a full range of body styles over the 13 year production run. Needless to say, the choicest models have two doors, large engines and were produced from 1964 to 1970, are most highly sought after by collectors and have the highest base price which reflects demand. The first two generations, till 1973 may have the nicest lines, but NASCAR Chevy teams liked and raced the G3 Chevelle widely through the last half of the 70's with success.

The V8 engine offers in G1 are the 396 big block and the 283 and 327 small blocks. For the G2, power options are expanded, adding two small blocks, the 307 and the iconic 350, while the big blocks additionally include a 400, a 402 and the 454. Offers in G3 are decreased, with the 454, 402 big block now gone and the small block 327 is also axed. The transmissions available throughout the production years are a 3 or 4 speed standard and the 2 or 3 speed automatic units, although G3 drops the two speed automatic from the options sheet. The body parts and panels for any Chevelle are widely available and if the car is returned to original factory

specifications it will remain, forever, a hedge against inflation for you.

The Hardtop or convertible models from the last half of G2, (71 or 72) are a lower priced purchase option with EPA mandated pollution controls taking effect, but any year can be acquired easily, then driven home for $15,000 going upward to $100,000.00 for the more rare muscle. I did find a couple of numbers matching early Chevelle two door hard tops, looking very clean, for under $10,000.00. The asking price will give some indication of the vehicles condition and I also turned up two 1977 Chevelle models for under $3,000.00 touted as “rust free” and “a good project car” in a half hour search on-line. I could not, however find any of the

highly prized and powerful Yenko Chevelle for sale anywhere. An auction house would be a good place to find one, or other rare unit, just make certain your pockets are full if you plan on making a bid.

Related:

Chevrolet Chevelle Third Generation 76-77

Chevrolet Chevelle Third Generation 1974-1975

Chevrolet Chevelle third generation 1973

Chevrolet Chevelle 1970-1972 Second Generation part 2

Chevrolet Chevelle Second Generation part one 1968-1970

Chevrolet Chevelle First Generation 1964 to 1967

Chevrolet Malibu 1964 to 1977

Chevrolet Corvair

To a purist, the Chevrolet Corvair is not a muscle car, but it is agile on mountain roads, it can go fast, and will get you up to speed quick. The car is fun to drive, simply put.

© Tomatika | Dreamstime.com Chevrolet Corvair 700 Photo

The Corvair is a compact car made in the USA from 1960 through 1969. With a large number sold; it was a windfall for Chevy. There were more than 1.2 million that rolled off the assembly line in the first six production years; all the traditional two and four door models including a station wagon are available. Chevrolet also

offers the sporty Monza Spyder, a pick-up or a passenger van are all offered in some select years. The car is powered by a rear mounted air cooled six cylinder engine and is the only mass produced vehicle of this type ever successfully marketed in the USA. The optional gas heater will warm the passenger compartment immediately; making chilly morning starts more comfortable is a very unique, attractive feature.

© Tomatika | Dreamstime.com Chevrolet Corvair 700 Photo

The first generation Corvair entry level 500 is Spartan, and the 569 and 769 more uptown; all are powered by the Turbo Air six

which could be coupled to a three speed standard transmission or the added cost option, a two speed Powerglide automatic. The engine develops 80 hp (60 kW) and will accelerate as quickly as the full sized entry level six cylinder Biscayne, but by February 1960, a higher performance version of the engine can be purchased. This unit kicks the performance up to 95 hp (71 kW), developed at 4,800 rpm and producing 125 lb-ft. of torque at 2,800 rpm. The more powerful engine is RPO 649 and was available for any Corvair of the time, but could only be installed with the standard transmission. In 1962 a convertible is offered for the first time and the high performance Monza Spyder, with the same six cylinder engine, supercharged, will deliver 150 hp (112 kW). Optional performance equipment includes Metalic brake linings, heavy duty suspension featuring; front roll bar, beefed up springs, plus calibrated shock absorbers. The most popular model was the Monza coupe, with 151,738 units out of the total production of 292,531 that year. The supercharged engine is not available in 1965 and is replaced by a normally aspirated carburetor system and now puts out 140 hp (134 kW). The fuel to this engine is supplied by an uconventional four

single throat carburetor system, larger valves and the duel exhaust pipes for lower back pressure.

© Tomatika | Dreamstime.com Chevrolet Corvair 700 Photo

There are many cars available today. My half hour internet search produced:

- On eBay, a Monza Spyder for under $17,000

- Other listings. Many clean looking Monza/Corsa Corvair 5,000-34,000.

- Low end was an intriguing “used” Corvair for less then $2,000

The Corvair was first car that Don Yenko chose to modify for the track and one Yenko Stinger put out 240 hp. There are many clubs devoted to the Corvair making a huge support and parts network at your disposal.

Related:

Chevrolet Corvair – 1960 to 1969

Chevrolet Corvette

The Chevrolet Corvette was introduced to the public in 1954 and remains in production to this day, now in the seventh generation. Any of them are worthy collector cars, but with a high initial cost. G3 may be the most affordable and easy to locate. There were more than 133,000 Corvette models sold during the G3 and from 1968 until 1972. Only about 55,000 of those were convertibles and the balance are coupes, during the four year production run. The ’69 Corvette production numbers were way down, due to a strike that year, with only 17,316 units leaving the

assembly line. The G2 and G3 are among the best styled Corvette`s with an "in your face" attitude and a forceful image. American muscle at its best.

From 1968 onward, your hard top can be optioned sporting the newly introduced “T” roof with two removable panels. The G3 engine and chassis components are very similar to the G2 offerings, although the body and interior have both received a make-over. Conventional rear exit dual exhaust is standard in the G3, but side pipes are a factory option only in 1969, for this generation.

The new base engine for ’68 is the exceptionally well-engineered small block 350 cu in (5.7 L) putting out 300 bhp (224 kW) to replace the 327 as the entry level. Some would call the 350 the best small block engine ever produced; it’s still in production and available in a crate version, through the “Mr. Goodwrench” brand, manufactured in Mexico. A new high performance engine is the all-aluminum ZL1 and this develops 560 bhp (420 kW) allowing a “vette so equipped, to do the standing quarter mile in 10.89 seconds. Small block engine output peaks in 1970 with the high compression, high revving, LT-1, putting out 370 bhp (276 kW).

Optionally available, ’70-’72 inclusive, is the 454 cu in (7.44 L) engine, produced from the 427 big block. This is the LT-1 engine and combined with the ZR-1 performance package will allow the engine to be race ready, but is a rare find with only 53 units produced.

Any well maintained “vette will command a high resale price, but this price is based on demand. However, with a half hour internet search, I found prices ranging from $13,000 to $75,000, although $15,000-30,000 seemed to be a rough average asking price. I perceive that these prices are all on the high end. It should

not be a challenge to find one to fill your needs in or around the $10,000.00 range, possibly much less if you have time to search more thoroughly. The Corvette Clubs of America have chapters throughout the USA with events and meetings held regularly, these events may well be the best place to locate a project car, at a fair market price. New reproduction parts are widely available with a large support network of clubs and retailers that specialize in Corvettes to keep you mobile with a minimum hassle. General Motors will also have a large inventory of crate engines in various sizes and a good supply of the drive chain components you may need, to keep you mobile.

Related:

Chevroloet Corvette 1968-1982 Third Generation

Corvette—The Beginning, 1951 to 1962

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ray 1967 Plus the L88 Option (’67-’69)

Corvette C5 1997-2004

2014 Corvette Stingray and Z51

Chevrolet Corvette Second Generation the Mid Years

Chevrolet Nova

A stock Chevy Nova can be powered by a not so little engine that could leave almost every big boy toy eating dust or in a cloud of

smoke and smelling rubber. For all the above reasons the Nova is a perfect muscle car to own and rewarding restoration for a fan. Economy is the targeted market of the 1960 Chevy II when introduced, but towards mid-year 1960 the Nova could be powered by a seldom chosen 327 engine. The cost of the option would almost double the base price, making one of these a very rare find today. The compact and modest 1960 Chevy II is introduced as no frills transportation for the budget minded family. This is how it remains, until the 1962 model year when that same cute, but sedated looking family car, could have a 396 under the hood – a perfect sleeper for your enjoyment. However, the engine is not installed at the factory it is offered as a dealer option only.

Almost any engine in the GM arsenal can be bolted into your Nova and coupled to the appropriate transmission. In 1963 the Chevy II can be all dress up with RPO Z03 - a Nova SS trim package, but is only available for the upscale 400 series sport coupe.

There are still more reasons, as to why, a Nova is a good car to acquire for your first or last project. There have been literally millions of Chevy II or Nova models produced over a 14 year period. The 1962 Chevy II attracted people to showrooms from all walks of life, and production numbers rose almost yearly to a high

of around 350,000 units in ’74 when production ceased. In 1972 the power option is a two barrel allowing the 350 to develop a meager 200 bhp making the factory muscle Nova past tense by ‘72.

The internet has a very large selection of Nova/Chevy models to buy right now with most in the $20,000.00 to $30,000.00 range up to the highest at around $250,000.00. There are many listed today for under $1,500.00 in as is condition and a good list of older restorations or original cars between $5,000 and $15,000.00.

The most inexpensive project car you might find could be a half finish one with an owner that has ran out of interest, cash and/or time. Please know and remember if you tackle a ground up restoration of any vehicle, it can turn into a much higher bottom line plus over a longer time span than you anticipated. Don’t get to the point where some of the higher priced restorations listed above, will begin to look like a bargain. A most pleasing situation is to find a good solid Nova, with a good engine, tight drive chain, at the right price and then drive the car home. Keep driving the car, proceed slowly with restoring, get a feel for the vehicle. Enjoy driving your

car, maintain or improve it while on the go will give you the most enjoyment.

Related:

Alf’s 1965 Chevy II Nova SS—A Member’s Muscle Car

Chevy II to Chevrolet Nova—The Third Generation 1968-1970

Chevy II to Chevrolet Nova second Generation 1966-1967

Chevrolet Chevy II plus the Nova SS-1962 to ’65

Chevrolet Nova 1971 to 1974 (G3 ’68-’74)

Chevrolet Chevy II Origins to 1965 – the First Generation

Breakdown of the 25 Best Muscle Cars to Own (General Motors – Pontiac)

Pontiac Division

Grand Prix and Catalina

The Grand Prix is uptown equipped while a Catalina has similar lines but sparser; they are both essentially the same car as the coveted, high performance GTO. Either of these less sought after Pontiac models can be equipped with the same power train as the more compelling sibling, the GTO, but with a much lower initial cost price. Almost every example of either model will have a three speed automatic as an option or a three speed standard, while for most model years, the Grand Prix had a four speed transmission as an added offer on the original dealer's option sheet. Both cars can have the mechanical components of the GTO, giving the same performance potential or even higher, with modifications, than a factory equipped GTO. Parts swap between models, from any part

of the drive chain is common place for any related GMC vehicle and can often be performed without modification, by anyone with a desire to complete the chore. The Catalina was in production from 1950 until 1980, while the Grand Prix is first seen in 1962 and retired in 2008, as GMC prepares to phase-out the Pontiac Division at the end of 2010. The Pontiac had been a very common and respected brand since first created by GMC in 1926. Related vehicles to consider, in a similar price range, could also include the Pontiac's Tempest, LeMans, Ventura (compact '74 only), Parisienne and Bonneville models.

© Antonsokolov | Dreamstime.com - Pontiac Grand Prix 1978 Photo

I located a large selection of restored or well-maintained Grand Prix from 1964 to 1981 for sale with a half hour internet search; most commonly, from $10,000.00 to the mid-twenties. The highest asking price I saw was $150,000.00, but there are many listed for sale and looking good for under $10,000.00, also a number of possibilities under $5,000.00-down to a low of $900.00, but if it fits the criteria, may be a job worth doing. The low end prices are obviously going to need lots of work, but if the frame is straight with a body free of extensive rust penetration, it could be a good candidate for a project car. A new Interior can be reproduced by a local shop if not available as an aftermarket package. A competent upholsterer will refurbish an interior as close to original appearing as you require or can afford. The seats and other convenience, safety or comfort accessories are often interchangeable with a comparable year or generation. A full range of interior coverings including door panels could be interchangeable; with a few careful measurements would tell you if you could substitute a plain dashboard with a more uptown unit including the gauges and other assemblies. The mechanical parts

that will fit these cars are normally easy to locate, often locally, while exterior body panels, trim strips and other details becoming increasingly available from aftermarket sources as time passes. Good "body workers" are innovative and can repair and replace almost anything to look like new, but major work like this is time consuming and very pricey; if the job is extensive, it may be unfeasible. Using the internet a body restorer can locate any original pieces that may be available from a vast network of wrecking yards in this country and beyond..

Pontiac GTO

How could we put the iconic GTO on this list of alternatives and affordable options? The answer must begin with a story and this will not be a long one.

Pontiac Division relies heavily on a high performance image in all their advertising campaigns. Backing Pontiac race teams works well to get the word out and selling fast cars to mobile people in a motivated economy is lucrative. In 1963, General Motors Corporate office issues an edict that no company division would sponsor a race event and this will definitely injure the Pontiac power image, but innovation dictates that the advertising focus would now be turned to high performance on public roads, rather than a sanctioned race track. The next edict from home office is that no intermediate sized car on the “A” body would have an engine larger

than 330 cu in (5.4 L) and this will injure the bottom line for Pontiac Division.

While the above is going on, Pontiac staff members; John DeLorean (chief engineer), Bill Collins (chassis engineer) and Russ Gee (engine specialist) are all equally given credit for creating the GTO - in the following way:

The three men had been working on re-engineering the mid-sized "A" frame Tempest (LeMans) a front wheel drive, to a more conventional (at that time) rear wheel drive and then power it with a big V8 borrowed from the full sized Catalina or Bonneville. This will produce a "Super Tempest" to appeal to the young and the young at heart. The new Tempest is not a super machine; although a

power option is and available as the GTO power pack. The sales manager at Pontiac, Elliot “Pete” Estes, approved the package, but thinking it would never sell, production was limited, to a conservative 5,000 units. The trend setting GTO had been hustled in the back door.

During a half hour internet search I found the largest grouping of restored GTO units ranging from $25,000 to $60,000.00 with a few at $100,000 plus. There were a very few listed at under $10,000.00, but they are around, and if you take the time to show up in likely places such as car swap meets, classic rally’s show and

shine events, you may find a GTO or any other classic vehicle you want, at a price you can handle.

How could we put the GTO on this list? It is very simple - it's about making your dreams come true. Find the muscle car you want, with few exceptions, you can locate any classic you want, in good condition, for under $15,000.00 and if you take time, likely far less than that. The first step is to get you in the driver's seat; an ideal second step is to drive the car while you plan the restoration.

Related:

1964 Pontiac GTO

Pontiac GTO 1968 and 1969

Pontiac GTO 1972 to 1974

Pontiac GTO 1965-1967

Pontiac Firebird

The GMC head office is very pleased and a bit relieved, when they know both Chevrolet and Pontiac Divisions are up and running to have a newly designed four(4 ½) seat sports car in showrooms for 1967. The parallel relationship of the Pontiac Firebird and Chevy's Camaro will be a long one. Both divisions have the same vast arsenal of GM engines to work with, including drive chain components. Pontiac has borrowed all of these, from all divisions, freely, in 35 years of production. There is a constant, but mutually beneficial rivalry of Pontiac and Chevrolet, to have their design

perform best, raising the bar higher each time. The Pontiac engineers want to be the first ones to coax higher performance from each variation produced from the same basic two, large and small block, engine casting designs. The rivalry continues until the end of Firebird production in 2002.

Throughout the four generations of Firebird production, there have been millions that left the assembly line and all of them desirable as possible muscle cars. In the first three years of production alone, there were 1.2 million of the top performing Trans Am models produced, while the next three generations add another

1.77 million to the list of vehicles. Many of these are still mobile. The list of available parts, both new and used, are there in large enough quantity, to make locating what you need as easy as it gets.

The Trans-Am series racing is where the Firebird is used, through the 60's and 70's, but controversy erupts when Pontiac introduces the new Firebird Trans-Am, using the name without permission. The SCCA had their lawyers threatening GM and Pontiac with a law suit before the oversight is rectified by Pontiac paying the plaintiff $5.00 for every unit sold. The Trans-Am could not compete in the series, because the smallest engine available for

it, is larger than the 400 cu in (6.6 L) which is the maximum size allowed to compete. The Trans-Am logo is first seen for the International Race of Champions in 1996 where they competed through 2006.

My half hour internet search located many Firebirds' listed for sale, at all prices from $10,000.00 to $30,000.00 and beyond, with the highest unit at $94,950.00 for a one of a kind, low mileage 1970 concept car. I know the prices can go far higher than that for a numbers matching high performance Trans Am or Formula show car, but there were none listed for sale today. I found

one 1968 incomplete project car for $5,500, but also tuned in to a few original condition units with an asking price under $5,000. I think a good percentage of the owners are fishing, and will hold out for big bucks. Locating a motivated seller is a key to own a project Firebird that you can drive home, in the price range you want. Many fine looking uptown Firebirds are listed to be sold in a number of upcoming auctions.

Related see Camaro:

Pontiac Firebird 1993-1997 Generation Four – part I

Pontiac Trans-Am & Banshee Roots

Pontiac Firebird First Generation 1967 to 1969

Pontiacs Fiftieth Year

Oldsmobile Cutlass

The Cutlass, first generation is an uptown trim package for the Oldsmobile compact F-85 during a four year run, from 1960 through ’63. These may be collectible vehicles in their own right, but the Cutlass, for the next three generations (64-77), is on Oldsmobile’s

intermediate size frame and is rear wheel drive; this the vehicle covered here. The Cutlass nameplate continues on through to 1999 (G6), first down sized and later as a front wheel drive vehicle, these may also be attractive to a collector, but not the object of this article.

©Swtrekker | Dreamstime.com "Highway To Heaven" A 1972 Oldsmobile Cutlass

1972 Cutlass

Oldsmobile Division has never manufactured in the same quantities as, say, the Chevrolet Division and from 1964 until 1972 there were around 200,000 (slightly more?) of the Cutlass that left the assembly line. As an example, one year, has a total Cutlass

production of 9,845, in all body styles, with a V8 under the hood. There are 772 units of the total powered by the powerful W30 big block V8, mounted with a four barrel carburetor and 631 more vehicles further equipped with the Hurst-Olds (4-4-2) performance package, only one of which is a station wagon. The highest production year ever for the mid-sized, rear wheel drive Cutlass was 1977 with 632,742 units assembled that year. The production numbers for most years are unreliable and somewhat sketchy, making precise calculations impossible.

During my half hour internet search I discovered a few Cutlass' readily available for under $5,000, but many more from $5,000.00 to $10,000.00 and a good supply from $10,000.00 to $20,000.00. One 1979 Hurst equipped, W30 big block Cutlass was listed at $15,000.00, while the highest price I found, in this quick search was $45,000.00.

An Oldsmobile Cutlass made between 1968 and 1972 is possibly the cheapest Oldsmobile you could find to restore. The

model is less powerful than the 4-4-2 and Hurst-Olds units which are highly coveted by collectors but there are a wide variety of high performance parts around at affordable prices, both original and aftermarket. Parts swapping between models is common and easy to perform, but could be an expensive proposition. The cheapest way to upgrade an engine and drive chain is by finding a good parts car, possibly from a wrecking yard although new assemblies are not hard to come by, they'd be costly, if top drawer performance is wanted. The engines and complete drive chains are selectively interchangeable, allowing you to easily modify your Cutlass, so it can perform the way you like.

Related:

1971 Oldsmobile 4-4-2

Oldsmobile 88 1954 to 1958

Oldsmobile 442-1964 G1

Epilogue Fast and Faster

Fast and faster has always been the goal; a case in point is the infamous “red flag law” which was put into effect in the U.K. first, then later, by States of Vermont in 1894 and Pennsylvania legislated a similar law in 1896. This law stated that a horseless carriage would be controlled by three persons-one would have to walk not less than 60 yards ahead of said vehicle carrying a red flag to warn of its approach.

The earliest prearranged road race may be the one that took place in the U.K. at 4:30 a.m. on August 30, 1867 between two steam powered vehicles; one owned by a Danial Adamson and the other by Isaac Watt Bolton, although the names of the actual drivers was never made public in fear of violating the “Red Flag Law” which was by then was on the books and strictly enforced in the U.K.

An interesting race took place on July 16, 1878 when the state of Wisconsin offered a large cash prize to the fastest vehicle to complete a 200 mile course, although only two carriages actually

raced. The vehicles were the Oshkosh and the Green Bay, which were named after their respective home town. The heyday of the muscle car era begins around the mid 1960's in most minds. This is when high compression engines were perfected, using technology of the day, but these cars performed best on leaded gasoline. By the early 1970's when catalytic converters are mandated which need unleaded gasoline to work properly and lower compression as well are the norm for reducing emissions. It was not only the EPA with increasingly strict regulations enforced to reduce greenhouse gases, additionally, new insurance regulations designed to keep powerful muscle cars under tighter control or off the road entirely. Added to the problem were oil shortages/embargoes, whether artificial or real, had collectively and effectively ended this chapter for powerful passenger cars. The manufacturers would put high performance on the back burner, while personal comfort and luxury are emphasised as they rethink the gasoline powered engine,

Land speed records have been kept since 1898, when Acheres Yvelines from France set the first official record on December 18, 1898. He was driving an electric vehicle that took

him to 39.24 mph (63.15 km/h) over a one kilometer track. There is no one group that is designated to validate a new speed record, it can be documented by any number of legitimate regional or National organizations, although under the guidelines set down by the “Federation International de l’Automobile”. The ”flying start” regulations are in effect for the speed record challenger and results are based on the vehicles average speed over two separate runs that must be taken within one hour of each other; additionally, the new speed record must be a minimum of one percent faster than the previous record to be recognized. It is 1902 before the record is held by an American named William K. Vanderbilt and his record is also the first one to be held by a gasoline powered internal combustion gasoline engine. Mr. Vanderbilt managed to achieve 76.08 mph (122.438 km/h) driving his car, the “Mors”, in France at Albis-St, Arnoult. This record was broken on a cold January morning in 1904 by Henry Ford on a frozen Lake St, Claire near Detroit. Henry set a record of 91.37 mph (147.045 km/h) in his Ford 999 Racer-a vehicle he designed as well as built. Although, his record was not universally accepted and he held it for less than one

month, he had achieved his goal of raising awareness of the newly opened Ford Motor Company.

Two land speed categories now exist; one is held by a vehicle that has the power put directly to the wheels and the absolute speed record which is held by a jet powered unit. Jet power could hold both records, but the power must go from the engine and put directly to the wheels, then only, could a vehicle make it valid in both categories. The absolute speed record was traditionally held by a wheeled vehicle, but only until 1963 when the jet powered “Spirit of America”, driven by Craig Breedlove eclipsed the previous record. This changed the rules and the new absolute category was created.

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