

T.I.P. (Technical Information Package)

Number: 105

Subject: A Beginners Guide to Building a Street Rod or Restoration Project

INTRODUCTION

There are as many reasons for choosing to build a street rod or restore a vintage vehicle as there are people. For some it is the desire to restore (or street rod) a piece of family history, for others it is simply a desire to join in a fun hobby.

The information presented in this document is gathered from a variety of sources as well as the author's personal experience. The purpose of this document is to offer a few simple suggestions to make the undertaking of a restoration/street rod project an even more enjoyable process.

CHOOSING A PROJECT

The choice of a project vehicle can be determined by many factors.

In some cases the choice of a project vehicle may have already been determined. Perhaps a vehicle that has been in the family is in the need of restoration. In other cases the type of vehicle has been determined, but the actual vehicle still needs to be purchased.

If you are in the market for a project vehicle, several items need to be considered.

Purchase Price of the Project Vehicle: To some extent, the type of vehicle chosen could be limited by your budget. Certain popular models/body styles can demand a high price even for a rough project vehicle.

If you do not have your heart set on a certain body style or model, it you may want to consider a body style or model that is not as in such high demand. Sometimes a more complete vehicle of this type is a better deal than an incomplete high-demand vehicle, but remember the choice is ultimately yours!

There are several publications available that can provide guidelines to current market prices for collector vehicles.

Condition of Project Vehicle: Regardless if you are working on a restoration or rod project, it is desirable and cost efficient to buy as complete a vehicle as possible.

For restoration projects, missing parts, even minor brackets and trim, could be costly and time consuming to track down.

For street rod projects, parts not needed could be sold to recover the initial investment. Although, if you are planning a street rod project, an incomplete vehicle at a lower price may be worth considering.

If considering an incomplete vehicle, an evaluation of the vehicle should be made to determine the impact of the missing items.

Example: Missing, worn or damaged drive train components will not have as much an effect on a street rod project as it would for a restoration project.

The cost and availability of the missing items should be taken into consideration when determining the purchase price.

Regardless the final goal (restoration or street rod), a running vehicle could be enjoyed while planning the next phase of the project. If it runs and can be may safe to drive, enjoy it for awhile!

Availability of Replacement Parts: Certain models/years have more aftermarket/reproduction parts available than others. The availability of parts could effect the cost and time required to complete a project.

DO THE WORK YOURSELF, OR HAVE IT PROFESSIONALLY DONE?

The question of whether to do the work yourself, or to have the work done by a professional shop is always a big one. For many hobbyists the fun is in performing work themselves, for others the time/skill factor determines this issue. Chances are however, that even the most skilled hobbyist will "farm out" some aspects of a project that require specialized skills and/or equipment.

If you choose to have a professional shop do the work, do some research before committing to the work. Have a written understanding as to what is work to be done and the costs involved.

When working on a project of this type, there will always be some items that will be unforeseen by both parties. When this situation arises, both parties should agree on how it should be handled.

PLANNING

Before any disassembly is done, it is important to first have a plan. Proper planning can limit (but not eliminate) the frustration factor encountered in any project. It can also reduce the time required to complete a project.

Tools and Workspace

Workspace and Storage Areas: The workspace can range from a carport to a multi-stall, heated garage. The bigger and the better equipped the workspace is makes the work easier and more comfortable, however many fine projects have come out of a limited workspace.

Availability of storage space can be a real boom to working on a project. Storage space is useful in keeping the workspace clear, as well as keeping parts from becoming damage or lost.

Tools: Like the workspace, much progress can be made even with limited resources, however, the greater variety of tools at your disposal makes the work much easier and safer. The advantage with tools is that specialized tools do not have to be purchased, as most specialized tools (engine hoist, power tools, etc.) can be rented or borrowed as needed.

Always practice safe working habits. Always use the correct tools for the job and know how to use them safely. Do not cut corners (cost) when it comes to your safety and the safety of those around you!

Camera: For any project of this type a camera is almost a necessity. The level of expense can be kept to a minimum, as any camera for any camera that you may have will perform the needed function fine, although the better the skills and/or equipment will produce better results.

The usage of a camera in the restoration process will be explained in "Take Reference Photos".

Computer: While a computer is certainly not an absolutely necessary to perform a restoration/street rod project, it can be very useful to record research information, progress logs, etc. This information could also be recorded on paper, however using a computer allows you to store the information in a central location, and also allows the opportunity to "back-up" the information.

For this purpose, the computer does not have to be very powerful, and would require only a simple word-processing program to record information. Sometimes a used computer with this capability could be purchased at a rummage (yard) sale, or can be found in a local want ad for a minimal cost.

For the more adventurous (advanced) hobbyist, a computer with an inexpensive C.A.D. (Computer Aided Design) program can be used to document parts that will need to be fabricated. Most of these programs do not require any special features beyond what is found on most home computers.

A computer (and additional equipment and software) could also be used for scanning photos and product labels (to be explained in "Keep a Project Log"), as well as other uses that you may discover for yourself. Of course, these added applications will add to the cost and skills required.

Take Reference Photos

Before any work is begun, it is very useful to take "before" photos of your new project. This should be done even if the work is to be done by a professional shop.

Photos should include general overview photos taken from all around the vehicle, as well as photos of important details such as decal/identification plate locations, pinstripe designs and/or color combinations, unique features, etc.

During disassembly, photos can be very useful to ensure correct assembly.

Sometimes it will be helpful to take photos of other vehicles like your project at car shows and museums, to be used as a reference.

Photos are useful for keeping a record of the progress of your project at various stages.

Research

Research is an ongoing process. While you will have already done some research, you will need to continue research throughout the duration of your project.

Publications: There are many hobby publications available that cover almost every type of collectable vehicle. These contain useful information, as well as ads for commercial parts vendors.

Join a Club: Clubs can be a great way not only to enjoy the hobby, but also a great way to share information and "network".

There are many national/international clubs that focus on specific models and makes. This type of club is a good source of parts and information.

Many of this type of clubs have local/regional chapters and regional and/or national meets that can be a concentrated source of parts, and a way to "show off" you pride and joy when it's finished.

Local (usually general automotive interest) clubs can also be a great way to maximize the enjoyment of the collector vehicle hobby all year round.

A local club can be a great source of information on local services that may be needed (welding, machining, bodywork and paint, etc.) and general advice.

Surf the Internet: The internet is a great tool for research and the sharing of ideas for the automotive hobbyist. There are web sites devoted to almost any type of vehicle, with many of them having interactive features allowing hobbyists to ask and answer questions, buy and sell parts/vehicles and to share their projects with a large number of people who share their interest.

Visit Car Shows and Museums: Car shows and auto museums can be a great source of information, and can also be a relaxing afternoon out of the garage! Some museums have research libraries that can also be a great source of information.

Purchase Sales Literature, Service and Parts Manuals: These publications can provide a wealth of detailed information:

Sales literature can provide information on original colors and interiors, optional equipment that was available, etc.

Service manuals can provide disassembly/assembly, repair and maintenance information.

Parts manuals many times can provide exploded views, to assist in the proper assembly. It can also be useful in determining correct replacement parts when at swap meets.

After the project has been completed, these publications can be used as display items!

Keep a Project Log

Note: Information is valuable, do not trust your memory!

A "project log" is important for several reasons:

Record Progress: This can not only be a moral booster, but will help in planning future needs and goals.

Record Part Information: When purchasing parts, from a commercial source, swap meet, local merchant, etc. it can be useful to keep a record of the following items for future use (replacement, sharing with other hobbyists, etc.):

Date Purchased

Vendor Name

Vendor Address (especially if mail order)

Part Number

Any other part information (record or keep information panel of the package)

Record Cost Information: Record the cost of parts and services (disclosure of this information to your spouse is at your discretion and/or peril). You may want to record the funds raised from the sale of spare/unneeded parts to offset the cost of parts/services purchased.

Record Ideas, Comments, Research Information, etc.: Often during research, or disassembly, information will be obtained that will be useful at a later date. As stated earlier: Information is valuable, do not trust your memory!

Record Contact Information: Many times useful contacts can be made by talking to other hobbyists at various opportunities. Whenever possible exchange addresses, phone numbers, e-mail addresses, etc.

Keep a "Shopping List": Some items are not available through aftermarket or reproduction vendors, and may only be available at swap meets. Maintain a list of parts and tools needed to complete your project.

Note: From personal experience, I have sometimes forgotten to look for an item (especially small items) until on the way home. Keeping a running list of items to watch for minimizes the chance of forgetting some small but important item!

FINDING PARTS

Swap Meets and Car Shows: As in research, swap meets and car shows can be a good source of parts, as well as a pleasant day out of the garage.

Larger swap meets will be attended by commercial vendors, many which also do mail order business. Gather catalogs and business cards for future references.

Internet: Many hobby-related web sites offer a parts/vehicles for sale/wanted bulletin board, also many commercial vendors have web sites.

Salvage Yards: While once common, these are unfortunately becoming an endangered species, especially those containing collectable/vintage vehicles. There are still a few around the country that specialize in collectable/vintage vehicles. Check your local yellow pages and hobbyist publications.

Parts Vehicles: In some cases, it can be cost efficient to buy an entire parts vehicle. This is especially true if many miscellaneous parts (brackets, small items, etc.) are needed to complete a project. Parts not needed can then be sold or traded to recover the cost of parts and/or services purchased.

Purchasing a part vehicle does have several negative factors that must be taken into consideration:

- A parts vehicle will need to be stored. This could require extra cost if stored in a commercial storage facility, or use valuable space in your workspace.
- Buying an entire parts vehicle can tie-up needed funds.

The value (or need) of a parts vehicle must be considered before purchasing. As a suggested rule of thumb, at least 50-60% of the purchase price of a parts vehicle should be parts that can definitely be used on your project, with the remaining parts having some value for resale.

DISASSEMBLY

Now that the preparatory steps have been done, it is finally time to turn some wrenches!

Disassembly should always be done in a thoughtful, organized manner. Don't disassemble/remove any more parts than your ready to work on.

During disassembly, take photos, make sketches and record fastener (bolts, nuts, screw) size, number used and other information.

"Tag and Bag" all parts: Label all parts (especially brackets and other small parts). If old hardware, weather-stripping, interior fabric, etc. requires replacement, save samples with as much information (number/amount required, etc.) as possible. This will become useful when buying replacement parts.

A vehicle many have been repainted many times, or the original paint may have faded. During disassembly, check in enclosed/protected areas (inside fenderwells, under brackets) for the original color. These areas are less likely to be repainted and/or exposed to the sun and weather.

ASSEMBLY

Restoration projects can be a straight-forward process. If your research and notes are correct, once the parts are painted and/or repaired, the vehicle can be reassembled, using caution as not to scratch or damage parts.

Street rods pose a special problem, since many systems such as the drive train and suspension have been modified. The vehicle should be pre-assembled (in primed state) to test the operation before committing to final paint, upholstery and the addition of expensive "goodies". This will prevent damage (and expense) to painted surfaces if modifications are required.

It might not be a bad idea to run one car shown season in this condition as a "shake-down".

In either case (restoration or street rod) the vehicle will require some finishing touches (door alignment, paint touch-up, etc.) to complete the project.