

More Volts for Your Model a Ford.

Or maybe the question should be, I have 6 Volts now, do I need more? Well the answer to this question depends on how you are using your Model A.

A 6 volt electrical system as long as it is in good condition will work very well for the way most of us use our cars. Our Model A's were designed with a 6 volt electrical system which was found to be very adequate.

Today however, problems occur with many Model A's because they either do not have an electrical system that is in good condition or are not being driven often enough to keep the battery fully charged. Some owners feel the solution to electrical system problems is to convert to 12 volts.

Converting to 12 volts with an electrical system that is in poor condition will just mask the underlying problems. A better answer would be to do the necessary repairs to insure the electrical system is in good condition and then drive your Model A on a regular basis. Driving your Model A often will help keep all the mechanical systems operating as they should.

Now that said, if you find that you need more electrical power for additional electrical equipment such as CB Radios or the installation of Air Conditioning, it may be beneficial to convert the system to 12 Volts. Les Andrews in the 2nd volume of his Model A Mechanics Hand Book series has a very good section on converting your Model A to 12 volts.

Some components that have to be considered for change when converting to a 12 volts system include:

WIRING - As long as it is in good condition, Model A wiring is more than adequate for 12 volts. Actually, newer cars that were designed with a 12 volt system will have wiring of a smaller gage because fewer amps are required to operate the same type component than what would be required if that component was operating on 6 volts. The only change that is suggested is to replace the original 20 amp ammeter with a 30 amp unit.

GENERATOR - The original 6 volt generator will have to be replaced with a 12 volt alternator. Some owners have converted a 6 volt generator to operate with 12 volts but this is not commonly done. Lower output alternators are recommended because alternators with a very high output may require modifications to the Model A wiring system.

LIGHTS AND HORN - All lights will have to be changed to 12 volt bulbs and the horn will either have a resistor added to reduce the voltage down to 6 volts or the fields will have to be re-wound for 12 volt operation.

COIL - The Ignition coil will have to be replaced with a 12 volt coil or an external ballast resistor added to reduce the voltage to the coil.

BATTERY - Of course, the 6 volt battery will have to be replaced with a 12 volt battery. A new hold down for the battery may also be required. Buy a good quality battery that will last for several years. The existing battery cables will work as long as the clamps can be reshaped so they fit tight on the battery posts. Just remember, the new battery will be installed so the NEG. (-) post is the ground post.

STARTER - While a 6 volt starter will work with 12 volts even for a long period of time, It is highly recommended that the starter be converted to operate on 12 volts by replacing the field windings. Because the 6 volt starter, operating on 12 volts, will engage with much more force than when operating on 6 volts, premature failure of the starter drive often occurs. In some cases, the extra engagement force will cause the flywheel ring gear to move forward on the flywheel to the point where the gear will interfere with the inside of the flywheel housing.

There is a lot involved when converting to 12 volts so be sure this is really necessary before embarking on such a project.



Tech Tip

When converting your Model A from 6 volts to 12 volts it is necessary to change the polarity of the electrical system from Pos. (+) ground to Neg. (-) ground. Part of this change includes reversing the connections on the back of the ammeter. If this is not done, the ammeter will read backwards. Also be sure to check that the coil is connected correctly. The (+) terminal should be the "hot " terminal and the (-) terminal should be connected to the distributor.