

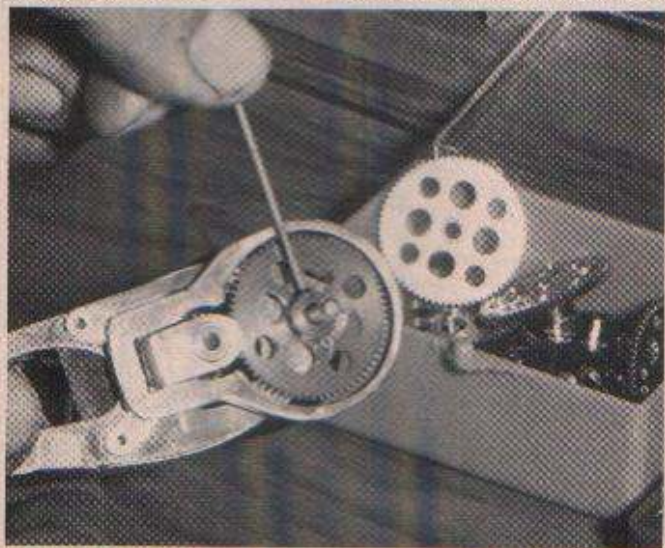
13) I generally do all my tune-up running on 30 volts. Although the racing in fuel division is 36 volts, the times on a 30 volt single run and a 36 volt two car run are almost identical. We might as well save the car and run it on 30 volts while tuning. After setting the desired voltage, push the start button and try to observe the reactions of the car. It should take about 1 1/4 ounces or more of nose weight in the front of the car. If the car does a wheelstand, add another small amount of weight to the nose. You want to keep the car's weight as light as possible for those low e.t.'s, but those wheelstands can really hurt your e.t.'s. The idea is to use just enough weight to keep the nose down and no more. Actually, on a good run, it's pretty hard to see, but the car's nose will lift about a 1/4-inch off the track. This 1/4-inch lift gives perfect weight distribution to rear wheels.



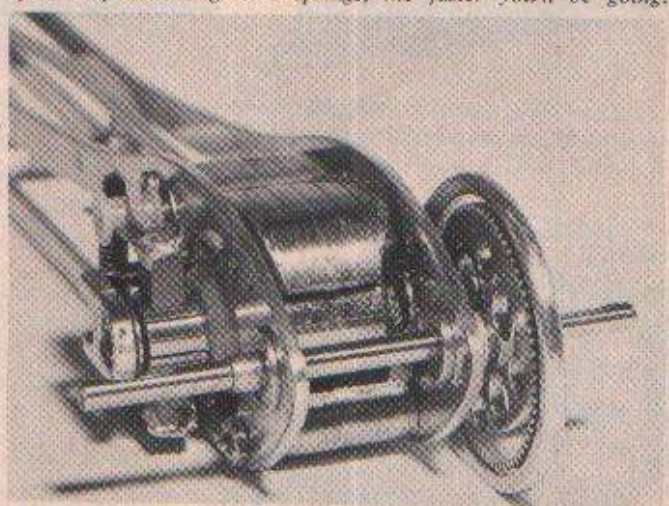
14) After you have the proper amount of weight in the nose, make two runs and note the car's times. If you're fortunate enough to be running on black Formica, you can tell if the tires are breaking loose by placing your eyes close to the track and sighting down the length of the track. If you can see any tire tracks your tires are breaking loose. It will be necessary to try another set of tires until you find a set that do not break loose. This actually is the toughest problem of all, but maybe next month's article will solve the tire problem for you.



15) Next to tires, the brush springs are the biggest determining factor in your car's speeds. We originally installed the stiffest of the three Ram springs. This is a good spring, but there are better ones. The only problem is getting the right one for a particular car, at a certain voltage, on a given track. There are thousands of different ball point pen springs that can be tried and also some of the larger hardware stores carry an assortment of small springs. Just cutting one coil length off of a coil spring, or stretching another spring, will really make a big difference in the car's e.t.'s. The more time you spend experimenting with springs, the faster you'll be going.



16) Finding the right gear ratio is one of the easier tuning steps. Finding the right set of tires or the right brush spring can be like looking for a needle in a hay stack. It takes as much or more time tuning the car as it did to build the car, so after you've made that 100th run and you have your best set of tires on the car and the best spring you've found, then you can think of changing the original 3:1 ratio gears that we installed. Next try the 2.8:1 gears. Make at least two runs and if the e.t.'s are better, then you can try the 2.6:1, although you probably won't have to go any lower than this. If you didn't go better with the 2.8:1 gears, go the other way 3.2:1 or 3.4:1 ratios.



17) Although many of you may not have thought of field laminations as a tuning phase of drag racing, it definitely is. Changing the contour of the field laminations can greatly change a car's speeds. The stock laminations give great starting line torque. You might say, "swell this is what I want." But is it? Too much starting line torque only causes the tires to break loose that much more, and also the stock laminations cut down the high speed rpm's. On the other hand, grinding the laminations too thin might cause the loss of too much torque, even though you've made the car much lighter. The idea is a perfect balance of the two which can only be done through more experimenting. Next month we'll tackle the tire problem with some new tips, and also explain the relationship between tires, motor power and gears.