

What Is Drag-Racing???

Motorsports in general are the third largest spectator sport in the country, and drag-racing is a major part of the sport of automobile racing. We will save you the agony of weeding through the history of how drag-racing began on an air-strip in California, and get down to the meat of the information.

Drag-racing is done on a 1/4 mile or an 1/8 mile straight track, and is the competition of two cars racing side by side from standing start with the purpose of reaching the end of the measured distance before the other. The cars can be competing with each other on a 'heads-up' basis, or with a handicap start. The three **PRO**fessional classes of drag-cars, the AA/**FUEL DRAGSTERS**, AA/**FUNNY CARS**, and the **PRO-stock**, all compete against each other in the same class on a heads-up basis. A new class, called **PRO-COMP**, which is a combination of 6 different types of dragsters, funny cars, and altered, also compete against each other on this heads-up basis. The only other heads-up race is a race between two handicapped cars, when they happen to be in the same class.



The first professional heads-up type race car is the **TOP FUEL (AA) Dragster**. It is always an open cockpit



car, the engine is unlimited in size, and runs on nitro-methane fuel, with fuel injection and a supercharger or blower. Engines now are all located at the rear of the car, placing the driver in front. Being an unlimited type machine, there are few restrictions other than a minimum 90 inch wheelbase and total car weight without driver must be 1800 pounds. Very strict construction and driver safety rules are enforced, since these machines at present run in the high 5 seconds bracket over 240 MPH. The second eliminator is the **FUNNY CAR**, which is



similar to the fuel dragster, with the big difference being the fiberglass body over the dragster engine and chassis. The body must be a 1969 or later replica of an American made car. Car weight including the driver is 1950 pounds minimum, with a 100 inch minimum wheelbase. Most all construction and safety requirements also apply to the funny car, since these machines are running in the

6's at 230 MPH. The **PRO-STOCK** eliminator car is quite different from the first two in that it must closely resemble an American factory production car, and run a non-supercharged engine on pump gasoline and carburetors. Car weight goes by different pounds per cubic inch, depending on the make and engine. Wheelbase varies from a 94 inch minimum for sub-compacts, on up. Safety standards are again rigid, for these high 8 second - 150+ MPH cars. Not spoken about yet are the special exhibition vehicles which compete frequently at the Raceway. They do not run as such in eliminations, and thus are not controlled as the pro and semi-pro cars are. This group includes the rocket cars, jets & turbine dragsters, and the wheelstanders. Because of their uniqueness and individuality, they are a great crowd pleaser. For the most part these cars are built very safely, and drivers skill is equal to that of a dragster of funny car pilot.

Handicapped race cars, commonly referred to as the semi-professional group, make up all the remaining cars which compete for money in the class drag-racing system. (The explanation of class drag-racing vs. E.T. or trophy racing can be found elsewhere in this program). Semi-professional eliminator categories include competition, modified, super stock standard and automatic transmission, stock, drag-bike, and our own unit stock eliminator, with hundreds of sub-classes. Don't panic, though, and think it is impossible to understand, as these handicapped cars, simply stated, have three main difference: (1) the car's weight; (2) the engine's size (cubic inches) or its horsepower; (3) the mechanical and parts difference which include, but are not limited to carburetion, ignition, engine, placement in the car, body

materials, etc. There is no handicap consideration given to compensate for the driver's ability or lack of, as there is for example in bowling, where the poorer bowler is spotted handicapped pins. To make this system very easy for each spectator to understand, the Great Lakes Dragaway is using the new par or index system to handicap race cars. This explanation is combined with the article explaining class drag-racing.

As mentioned, the most important thing in drag-racing quite obviously is to beat your opponent without red-lighting. More on the red-light and Christmas tree later. The second most important thing to a drag-racer is his elapsed time (E.T.), or the time it took him in seconds and fractions to go this 1/4 mile from a standing start. Most critical, where most races are won or lost, is right on the starting line, where the car is 'launched'. Poor car preparation, or a 'snoozing' driver who permits his opponent a holeshot, is most often the runner-up. The third and least important item to the drag-racer is his miles per hour speed. Because the speed is measured only at the end of the 1/4 mile, its only real function is to tell the driver how the car was performing at the end of the race. For instance, a racer can have a real poor start off the line, bogg, and still have the same speed as on a perfect run, but his elapsed time will of course be much slower.

The Christmas tree with two separate series of bulbs for the two lanes, and the related timing equipment seen on the ground at the starting line, and at the finish, is an expensive electronic device to permit a fair start to handicapped and heads-up racers. The tree itself is 20 feet away from the starting line between the two lanes, and the clocks are in the timing tower. The tower's

Timing equipment can be set for a handicap from .01 seconds to 9.99 seconds head-start to either lane, but the tower personnel **CANNOT** control the red-light or win lights at the end of the track. This signal is operated only by the race car's front tires through this electronic system. As simply stated as possible, the tree's upper two sets of bulbs are the staging bulbs, and indicated by burning when the race car front tires are first 12 inches from the 1/4 mile starting line, and the 8 inches away. This 8 inch space between the staged and last beam permit the race car to be moving before the green light actually appears on the tree, thus permitting the "holeshot".

After the two cars are 'staged', the tower will throw the switch starting the 5 sequential amber bulbs to count down in 1/2 second intervals. The second from the bottom bulbs are the red ones, and indicate an automatic disqualification for the racer in whose lane the red light shows. Only one racer can red-light on each run. The smaller center bulbs seen between the 4th and 5th ambers indicate when burning which racer will leave last, since it is obvious that each set of bulbs count down differently. Once underway, the only significant part of the system is at the finish line. Here, there are three ground beams adjusted for each lane. The middle one, is the actual end of the 1/4 mile, and determines the winner of the race. 66 feet on either side of the center beam (a total of 132 feet) is where the mile per hour is determined. MPH then is where the mile per hour is formula of time for distance covered equals the speed. Drag-racing then is very easy to understand, and most challenging sport to compete in. Victories are measured in hundredths of seconds, not pit stops or restarts.



