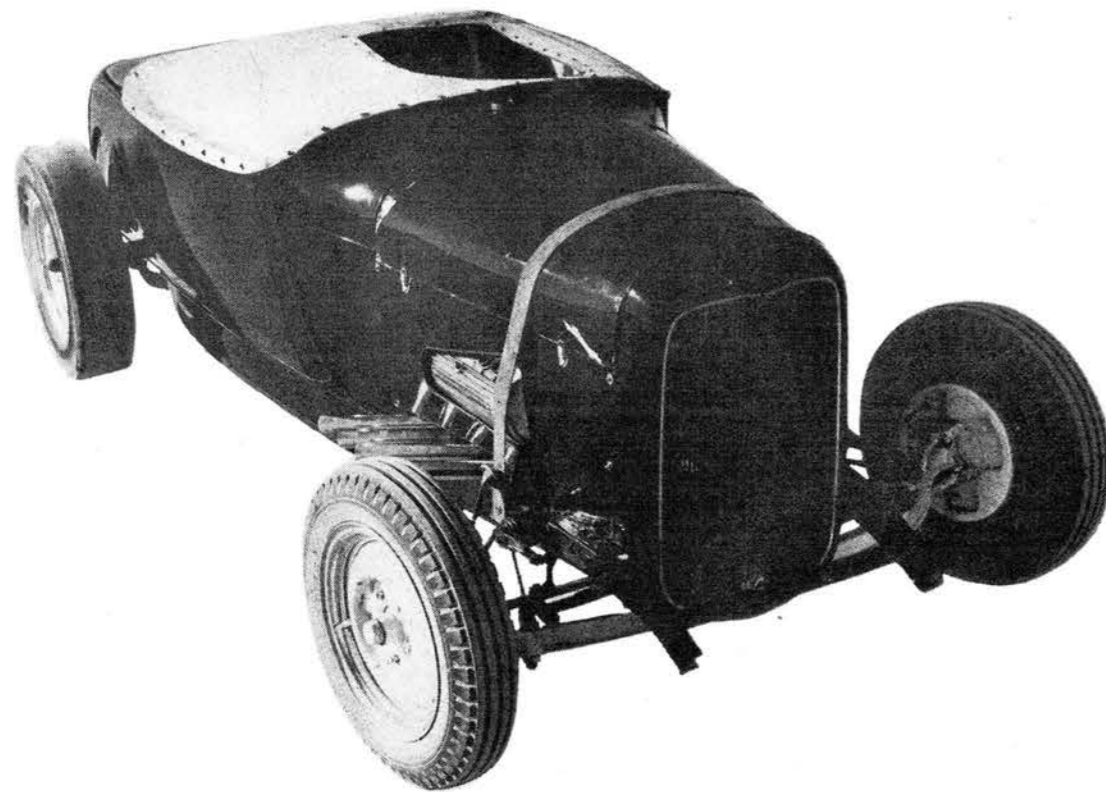


TWO SAN PEDRO LAKES AND DRAG STRIP ENTHUSIASTS BUILT THIS . . .



ARDUN ROADSTER

TEXT AND PHOTOS BY DEAN MOON

ARDUN OHV conversions have been adapted to many different types of chassis all over the world. The advantages of the hemispherical combustion chamber and aluminum head castings have been proven over and over again in competitive circles.

Jack Ewell and Bob Barron, of San Pedro, California, recognized the horsepower potentiality of this unit, scrapped their old flat head engine, and rebuilt their roadster around this new engine.

Taking first things first though, they spent many hours in consultation with Clem TeBow at C&T Automotive. They discussed the many CT impressions gained through experiences with their own record holding Ardun equipped roadster. Evidently these discussions were used to advantage, for the Ewell and Barron entry, upon completion, began breaking records at the drags and on the California desert dry lake bed at El Mirage.

The Engine

Using a '53 Merc block the first move was to fill in, by welding, the valve cham-

POWERFUL engine is installed in modified chassis prior to run at drags

ber area adjacent to the cylinder wall. This is necessary, in most OHV conversions, to permit adequate head gasket surface for sealing the combustion chambers. A piston stroke of $4\frac{1}{8}$ in. along with the use of CT Automotive domed pistons for the $3\frac{3}{16}$ in. bore results in a displacement of 284 cubic inches. Special steel center and front main bearing caps were used to reduce crankshaft flexing to a minimum. To complete the main block assembly a #285 Herbert Roller Tappet Cam assembly was installed.

The heads and valve actuation equipment were not modified to any great extent and the following equipment and accessories were added to the assembly. Offenhauser lead plate for advancing or retarding the Harmon & Collins Magneto without having to remove it from the engine. Hilborn fuel injector unit and a brass clutch disc. In drag strip competition CT had stripped the lining off the clutch disc every time a shift in gears was attempted. Solid brass disc linings are riveted to the disc hub and used with the regular flywheel and pressure plate.

Chassis

The completed engine was installed and

bolted to standard Ford transmission incorporating the use of '42 Zephyr, 25 tooth gears. Power through the transmission is transferred to a Halibrand quick change center section. Final gear ratio used at lakes, dependent on the length of the course, has been a 2.87:1 while the most successful ratio, to date, in the quarter mile drags was found to be a final of 3.76:1. A shortened transverse rear spring is connected to stock shackles and bolted to a spring mount plate on the fabricated tubular rear cross member. This cross member is bolted through end flanges to the '32 Ford frame rails.

50/50 acting Houdaille shock absorbers are used both front and rear.

The front axle has been dropped 3" and is mounted to a shortened spring and stock '32 Ford wishbone assembly. The front axle is mounted with a positive caster reading of 22 degrees. All four wheels are equipped with '48 Mercury hydraulic brakes using bonded linings.

Interior

The interior of this vehicle is neat, orderly and functional. An aircraft type aluminum bucket seat and safety belt are both bolted through the plywood floor panels to a special crossmember welded to the frame rails. CO₂ type fire extinguisher is clamped to the floor board within easy reach of the driver. Instrument panel contains tachometer, oil pressure, temperature gauges and magneto switch.

Radiator

The radiator was eliminated from the chassis of this automobile with the hope of improving the weight distribution. A 25 gallon lubricant drum has been installed as far rearward as possible and contains the necessary coolant. Water circulation is controlled by the use of stock Ford water pumps. A smaller front crankshaft pulley is used for a twofold purpose. First to lessen the amount of water pressure by reducing the ratio to the pump pulleys and lowering their rpm and second to reduce the rpm of the fuel injector pump. Water is routed through two $1\frac{3}{4}$ in. steel tubes between the engine and the rear mounted water tank.

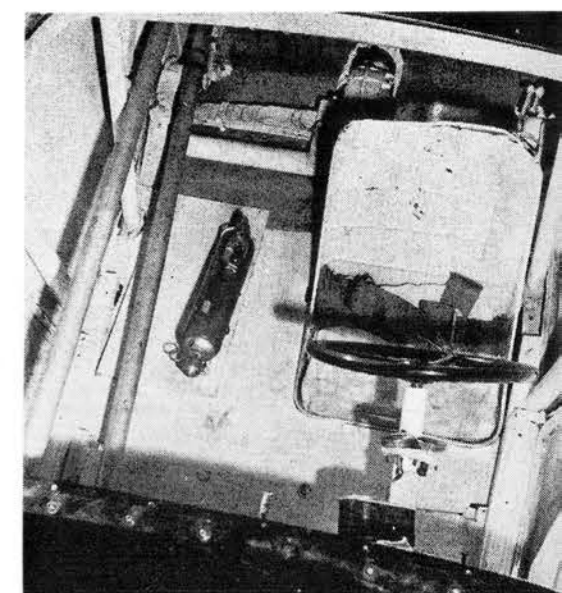
The cockpit cover (lakes tarp) is used for the very obvious reason of adding streamlining to the car by enclosing the large roadster passenger compartment.

The roll bar construction inside the body of this car will definitely be of interest to safety minded readers in the process of planning or constructing a car to be used in either drags or straight-away racing. Heavy tubing has been shaped to fit the inside contour of the roadster body just behind the driver's shoulders. Another similar tube is mounted inside the cowl and they are both connected by additional lengths of tubing just inside the doors with an upright brace mounted to the frame at the rear of the doors.

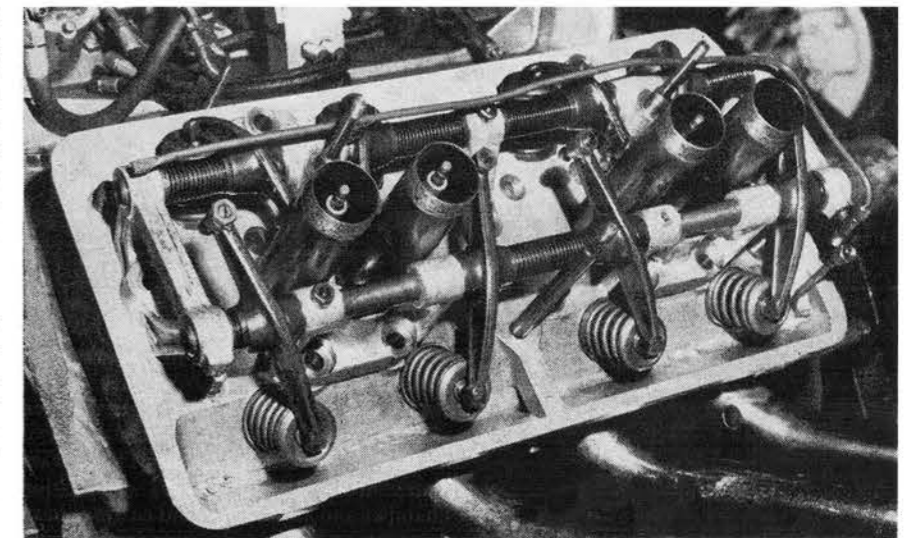
Outside appearance of this car is very pleasing to the eye of both the spectator and oldtimers who have witnessed the running of all types and all classes of cars. The cutout section of the hood side could not be avoided due to the width of the engine. However, it was done neatly and the cut edges were trimmed with rubber hose. Eight chromed exhaust header extensions (four to each side) appear just above the frame rails and a slender cut was made in the hood side to accommodate them.

The engine has not been tested on the dynamometer yet but we will estimate the probable horsepower output in the neighborhood of 300+. The car accelerated to a top speed of over 128 mph in the quarter mile drags at Santa Ana recently and now holds the roadster record there.

The potentialities of this machine and its owners are a threat to all competitors in their class. We feel that this team has built a beautiful competition car that will make a name for itself.



INTERIOR of cockpit shows how to assemble a functional roadster neatly



ROCKER cover has been removed to show how the spark plugs are recessed in tubes

COMPLETELY assembled engine is ready for installation in Ford chassis

ENGINE mounted in chassis. Note hose velocity extensions added to injectors

