Overhead Valve Heads for the Model T

By THE JARVIS COLLECTION
21421 Climax Road
Alderwood Manor, WA 98036

The search for the elusive Model T Ford overhead involves a lot of time and a lot of people. I would like to thank the following for their help: Mike Yeakel, Jim Burns, Ric Nowak and Layden Butler. I would also appreciate comments, corrections, or just correspondence. Write: Jarvis. Box 2245. Alderwood Manor, WA 98036.

The Model T began, as we all know, in late fall of 1908. It probably only took the time necessary for it to become a used car before the young men of the day decided to strip off a few parts to cut down wind resistance, in the hope that it could be made to go faster.

As early as 1914 aftermarket Ford magazines had pictures of beautiful speedsters, and articles on how to lower the chassis and make the T handle better. By this time the speedster body companies were advertising complete bodies or kits.

There is talk that a cylinder head was made by C. D. Noonon of Paris, Illinois, as early as 1915.

In the search for the different Model T racing head, one comes in contact with an almost endless variety. There are over twenty of the flat-head style. Most of the flatheads are the same except for compression. In fact, the Simmons Super Power, the Giant Power, and the Haibe-Hi-Power are all licensed under the Haibe Patent. The Ricardo has a different combustion chamber. The Riley had two spark plugs per cylinder.

The overheads for the T run the total range of man's ideas. There are heads with one valve per cylinder, two valves per cylinder, three valves per cylinder and, finally, four valves per cylinder. Some with one overhead camshaft; some with two. Pushrods were used to operate the overhead valves; most had the pushrods inside the block but at least one had the pushrods on the outside. To operate the valves, one ran ball bearings through tubes, and another used miniature saddles on top of the valve stems.

This article will be an attempt to identify all the Rajo's, Frontys and Roof heads. While some of the heads are similar, they all have a few differences. This identification will be made by means of the intake and exhaust ports, and the location of these ports, as well as spark plug size when it is known.

RULE NUMBER 1. All Rajo's have the intake on the right. The exhaust may vary from side to side, as well as the spark plug location.

RULE NUMBER 2. All Frontys intake on the left, and exhaust on the right.

This does not mean that the Roof fills in all the blanks. Some Roof heads intake on the right and some on the left. But you cannot be sold a head with the intake on the right and have it be a Fronty. Or more important, vice versa.

RAJO:

The factory advertising pamphlets and brochures were usually only issued when they brought out a new model Rajo head. These pieces are usually not dated, and are only for the Rajo heads, plus a few bolt-on accessories they also made. These accessories included offset spindles, valve cover doors, oil fillers, mag plugs and a water pump.

FRONTENAC:

Chevrolet Brothers issued a new catalog every year. They included a little history, what new parts were available, such as special axles, bodies, and what new heads they had produced. All in all a good complete dated catalog. If you are going to step out and buy just one, I would recommend Number 81, issued February 15, 1927. It has more information about the Fronty line than any of the others. Later in the year they inserted a sheet (in catalog 81) on the new single overhead cam conversion for the R (racing) and S-R heads.

Fronty Catalog 81 has the following information on page 7: If you buy a Fronty Race Car and buy one of their Fronty engines, you can expect the following:

Speed - Model R head, 96 miles per hour, straightaway.
Model S-R head, 104 miles per hour, straightaway.
Model D-O head, 110 miles per hour, straightaway. Later catalogs just say that the speed will vary with the equipment.

ROOF:

Robert M. Roof was the most prolific paper advertising publisher. I have seen over 60 pieces of different advertising for the Roof head. They began in 1917 and kept up a steady stream of advertising until the Model A equipment came out - and beyond. A piece recently turned up on a double overhead cam head for the Ford Six! Most advertising for the Roof is also undated. Dating began when Robert M. Roof sold out to Arthur S. Sinclair in the latter part of 1925. After that date
identical pieces of advertising were used; one with the Roof name and the same piece with the name changed to Laurel. These were the only changes -other than the name change the two pieces are identical.

I had hoped to include a list of the combustion chamber volume of all the heads but this is not to be as it is a big task and I do not have access to all the heads shown. What we do know is that the stock T in good shape should crank out about 40 pounds compression. The low or early head could crank out between 45 and 50 pounds. My 4-valve Rajo cranks 55 pounds. Fronty did take the time to list the compression of the different heads. The Model T Fronty is 60 pounds. The Model S is 70 pounds. The Model R is 85 pounds. The Model S-R is 100 pounds, and the D-O is 120 pounds.

### EASY IDENTIFICATION OF COMMON HEADS

<table>
<thead>
<tr>
<th>Left Side</th>
<th>Right Side</th>
<th>Manufacturer</th>
<th>Model and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2 intake</td>
<td>4-valve Rajo</td>
<td>Model A</td>
</tr>
<tr>
<td>0</td>
<td>1 intake</td>
<td>8-valve Rajo</td>
<td>Model 30</td>
</tr>
<tr>
<td>0</td>
<td>2 intake</td>
<td>8-valve Rajo</td>
<td>Model C or 35</td>
</tr>
<tr>
<td>1 intake</td>
<td>3 exhaust</td>
<td>8-valve Fronty</td>
<td>Models T, S or R</td>
</tr>
<tr>
<td>1 intake</td>
<td>3 exhaust</td>
<td>8-valve Roof</td>
<td>2 intake stub and rocker stands cast in head.</td>
</tr>
<tr>
<td>2 intake</td>
<td>3 exhaust</td>
<td>8-valve Fronty</td>
<td>Model S-R, 5 wide at top, 7 wide at bottom, either rocker arm or OHC.</td>
</tr>
<tr>
<td>2 intake</td>
<td>3 exhaust</td>
<td>8-valve Roof</td>
<td>Liberty</td>
</tr>
<tr>
<td>4 exhaust</td>
<td>0</td>
<td>16-valve Roof</td>
<td>Model A</td>
</tr>
<tr>
<td>4 exhaust</td>
<td>2 intake</td>
<td>8-valve Rajo</td>
<td>Model 31. Plugs on left side.</td>
</tr>
<tr>
<td>4 exhaust</td>
<td>2 intake</td>
<td>8-valve Rajo</td>
<td>Models B, BB, BB-R. B has standard Ford plugs on right. BB &amp; BB-R have 18mm on both sides.</td>
</tr>
<tr>
<td>4 exhaust</td>
<td>4 intake</td>
<td>16-valve Roof</td>
<td>Model C. Rocker arms or twin cams.</td>
</tr>
<tr>
<td>4 intake</td>
<td>4 exhaust</td>
<td>16-valve Fronty</td>
<td>DO twin cams.</td>
</tr>
<tr>
<td>8 exhaust</td>
<td>2 intake</td>
<td>16-valve Roof</td>
<td>Models B &amp; BB, BB has combustion chamber cut for large valves.</td>
</tr>
</tbody>
</table>

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**GASKETS FOR MODEL T FORD**

**OVERHEAD-VALVE RACING HEADS**

**Stock Model T Head Gasket**

<table>
<thead>
<tr>
<th>Victor</th>
<th>101</th>
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</thead>
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**8-Valve Model A Roof**

<table>
<thead>
<tr>
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<th>132</th>
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</thead>
<tbody>
<tr>
<td>Fitzgerald</td>
<td>101</td>
</tr>
<tr>
<td>McCord</td>
<td>5384</td>
</tr>
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**8-Valve Rajo, Fronty and Roof**

<table>
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<tr>
<th>Victor</th>
<th>328</th>
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<tbody>
<tr>
<td>Fitzgerald</td>
<td>244</td>
</tr>
<tr>
<td>McCord</td>
<td>5287</td>
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**4-Valve Rajo.**

<table>
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<th>460</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitzgerald</td>
<td>457</td>
</tr>
<tr>
<td>McCord</td>
<td>5288</td>
</tr>
</tbody>
</table>
Left side has single intake port. This Model R appears to have an enlarged intake port. Spark plugs are 7/8".

The single port Frontenac was introduced in early 1921. The original patent papers were filed March 13, 1921. The single intake port Fronty came in three models: The Model T, for passenger and commercial cars; the Model S, for speedsters; and the Model R for race cars.

The three heads were the same except for compression ratio, and the Model R had stronger valves. Most of these heads have their model number stamped into the ridge for the rocker cover. All three models were sold during the 1920's. The 1929 catalog has just the Model R for racing.

The Model R was used on the two cars that ran at Indianapolis in 1922.
CHEVROLET BROS. MFG. CO., INDIANAPOLIS, IND., U. S. A.

Picture on right shows Frentzas Cylinder Head complete, ready to install. The specially designed high velocity manifold is for Ford oneinch carburetor.

NOTE: Horizontally oriented carburetor (1/2") intake can be adapted for square bore, 3/4" intake.

The Frentzas 2-Spark 2-Carburetor Racing Head, Model S-R, for Racing Cars Only

This new model was brought out to meet a demand for some better than the regular Frentzas. As a result of research into the nature of 2 spark and 2 carburetor racing, we have arrived at this new design which is the result of long years of development. It is a combination of two units, each having a head, intake and exhaust system. The heads are designed to give maximum air speed through the intake and exhaust systems. The exhaust system is provided with an adjustable bleed, and the intake system is provided with an adjustable vacuum box for varying the air pressure in the intake manifold.

The heads are made of special material which is extremely strong and heat-resistant. The intake manifolds are made of a special alloy which is also heat-resistant and strong. The exhaust manifolds are made of a special material which is also heat-resistant and strong. The heads are made of a special material which is also heat-resistant and strong. The intake manifolds are made of a special alloy which is also heat-resistant and strong. The exhaust manifolds are made of a special material which is also heat-resistant and strong. The heads are made of a special material which is also heat-resistant and strong. The intake manifolds are made of a special alloy which is also heat-resistant and strong. The exhaust manifolds are made of a special material which is also heat-resistant and strong. The heads are made of a special material which is also heat-resistant and strong. The intake manifolds are made of a special alloy which is also heat-resistant and strong. The exhaust manifolds are made of a special material which is also heat-resistant and strong. The heads are made of a special material which is also heat-resistant and strong. The intake manifolds are made of a special alloy which is also heat-resistant and strong. The exhaust manifolds are made of a special material which is also heat-resistant and strong.

SPECIFICATIONS OF MODEL S-R HEAD:

Model: S-R
Type: Racing
Engine: Flathead V8
Displacement: 350 cubic inches
Cylinders: 8
Valves: 16
Engine Speed: 5,500 rpm
Compression Ratio: 7:1
Power Output: 300 horsepower

A FEW RACES AND RECORDS SET AND MADE BY THE FRENTZAS S-R HEAD

Indianapolis, Ind., May 31, 1934—A. J. N. Lejeune, driving Frentzas, won the National Championship race at Indianapolis Motor Speedway with an average speed of 105.771 miles per hour. The winner was followed closely by the second place finisher, Art中国移动

The Frentzas 2-Spark 2-Carburetor Racing Head has been used in many races and has set several records. It has been used in races at Indianapolis, Detroit, and other major race tracks. It has been used in drag races as well as in stock car races. It has been used by many famous drivers, including A.J. Lejeune, who won the National Championship race at Indianapolis in 1934.

Columbus, Ohio, October 31, 1933—Frederick D. H. White, driving Frentzas, won the 500-mile race at Columbus Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

Cleveland, Ohio, November 30, 1933—Frederick D. H. White, driving Frentzas, won the 500-mile race at Cleveland Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

New York City, December 1, 1933—Frederick D. H. White, driving Frentzas, won the 500-mile race at New York City Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

San Francisco, Calif., December 31, 1933—Frederick D. H. White, driving Frentzas, won the 500-mile race at San Francisco Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

Los Angeles, Calif., January 1, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at Los Angeles Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

San Diego, Calif., January 2, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at San Diego Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

Chicago, Ill., February 28, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at Chicago Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

Los Angeles, Calif., March 1, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at Los Angeles Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

San Francisco, Calif., March 2, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at San Francisco Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

New York City, March 3, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at New York City Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

Cleveland, Ohio, March 4, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at Cleveland Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.

San Francisco, Calif., March 5, 1934—Frederick D. H. White, driving Frentzas, won the 500-mile race at San Francisco Motor Speedway with an average speed of 114.257 miles per hour. The winner was followed closely by the second place finisher, Charles E. Latta.
The S-R Fronty is 5 inches wide at the top, and seven inches wide at the bottom.

The left side of the Fronty Model S-R has two intake ports and a single set of 18mm spark plugs.

The right side of the S-R has three exhaust ports and a second set of 18mm spark plugs. Note the four-stud mounting on the center port.

The S-R Fronty was introduced during the spring of 1923. The Chevrolet Brothers prepared a T engined car for the 1923 Indianapolis 500. Driven by L. L. Corum, it placed fifth, for the best showing of a T Ford at Indy.

The S-R has two intake ports on the left and three exhaust ports on the right. The S-R also has two 18mm spark plugs per cylinder, one on each side. In this writer's opinion, this is the most desirable Fronty of all. With either the rocker arm setup, or the single overhead camshaft which was available sometime after February 1927, it was the most trouble free and could stay with the best.
Overhead Camshaft and Drive for Model "R" and "S-R" Frontenac Cylinder Heads

This remarkable unit was designed and built by us at the insistence of many of our customers, users of Model "R" and "S-R" racing heads. It has many advantages over the old rocker arm system. It is simpler, more reliable, more efficient in every way and will add considerable speed to a racing motor, equipped with either cylinder head.

By eliminating the rocker arms it is possible to turn the motor up much faster than before and this allows the use of a supercharger if desired. Just note these facts: the size of the camshaft, 1-1/2 inches long, with all bearings and rolling of the camshaft, which is a common complaint when using old style camshafts, thereby securing full opening of valves, thereby increasing speed of motor. The cost of the cam is such as to give a very smooth valve operation, avoiding valve and valve spring breakages. The valve operating cups are free to rotate in guides. By using brassing and least armature, there is no danger of pipes coming loose. The whole unit is oil tight, the camshaft and valve cups operate in a bath of oil, with a drain hole at front. It will speed up your motor, make it more reliable and better looking.

Following is a brief description and list of specifications on this unit:

**Camshaft:** 1-1/2" diameter, hollow for force feed oiling to all cams and bearings.
**Valve Opening:** 3/8" after allowing for clearance.
**Valve Cups:** 1-1/8" diameter, hardened and ground, free to rotate.
**Main Bearing:** Cast iron, valve cup holes reamed accurately bored holes to match cylinder head.
**Drive:** Triple strength Diamond Silent Chain with adjustable idler.
**Housings:** Aluminum castings, sandblasted to a satin finish.

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Special Fronty Crankcase for Sliding Gear Transmission

This special crankcase and fly wheel housing was designed and built by us for the express purpose of eliminating the old style planetary transmission and replacing it with the new Model "A" Ford sliding gear transmission and clutch, which in our opinion, are admirably adapted for the kind of work required on dirt track racing cars. This crankcase will enable the racing car owner to do away with all bands and troubles attached to the old planetary transmission, will give a much smoother running and faster motor by doing away with all undue friction in transmission, will enable him to push or tow his racing car anywhere without special tow wheels, hence easier starting, with clutch, and many other advantages at a reasonable cost.

This will also permit running your racing motor on drysump, feeding cooler oil to the bearings, increasing the life of your motor considerably. This is in keeping with the best and latest practice in racing motors.

*Change can be made in very short time, no machine work necessary.*

*Can be used on any model Ford racing motor, regardless of what cylinder head or camshaft is used.*

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No. 120: Crankcase and fly wheel housing assembly, including support arms, reaming gear bracket, camshaft extension, and oil deflector ring

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No. 120: Crankcase and fly wheel housing assembly, same as above and including new Ford model "A" fly wheel, turned down, clutch, clutch housing, transmission, petals, universal joint, drive shaft, and torque tube, complete ready to install

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No. 101: Complete overhead camshaft and drive with housings, ready to install

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No. 102: Complete overhead camshaft and drive with model "S-R" cylinder head, carburetor, intake and exhaust manifolds

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No. 103: Complete overhead camshaft and drive with model "R" cylinder head, carburetor, intake and exhaust manifolds

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No. 104: Complete overhead camshaft and drive with model "R" cylinder head only, no equipment

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No. 105: Complete overhead camshaft and drive with model "S-R" cylinder head only, no equipment

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No. 106: Complete overhead camshaft and drive with model "R" cylinder head only, no equipment

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$350.00

$400.00

$450.00

$500.00

$250.00

$95.00

$85.00

$100.00
The 15-Valve Frontal Head, Model D40

FRONTAL 15-VALVE HEAD "COVERS REMOVED"

The last word in speed and power equipment for the Ford car. In order to satisfy the insatiable demand for something new and different, we brought out this new head, which has more than doubled the speed of the regular head. The engine block is made of high-grade cast iron, and the head of the cylinder is made of special steel. The spark plugs are of the latest design, and the valves are arranged in such a way that they give the maximum amount of heat to the engine. The engine is designed for high-speed work, and the head is made to take advantage of the high compression ratio of the engine. The complete engine is a marvel of workmanship, and the performance is equal to that of any other engine of its kind in the world. The Ford is the only Ford that has been scientifically designed and manufactured, and the engine is a credit to the company that made it.

SPECIFICATIONS

The 15-Valve Frontal Head is made of the finest steel and is thoroughly tested in all respects. The engine is designed for high-speed work, and the head is made to take advantage of the high compression ratio of the engine. The complete engine is a marvel of workmanship, and the performance is equal to that of any other engine of its kind in the world. The Ford is the only Ford that has been scientifically designed and manufactured, and the engine is a credit to the company that made it.

A Few Records Established and Races Won By Fords Equipped With 15-Valve Overhead Cam Head


Whitehall, Md., September 1, 1934—Bill Good, driving a 15-valve overhead cam head Ford, won the Labor Day Race. Time: 13 minutes, 12 seconds.

Whitehall, Md., October 15, 1934—Bill Good, driving a 15-valve overhead cam head Ford, won the Fall Classic. Time: 13 minutes, 12 seconds.


Los Angeles, Calif., August 3, 1935—Bill Good, driving a 15-valve overhead cam head Ford, won the August Classic. Time: 13 minutes, 12 seconds.


Because they have been the most successful in racing on the streets of America, Ford cars have been the most successful on the streets of America. Their performance is unequalled in any other make of car. Eight cars are given every Ford dealer before it is placed on the market, and once inspection is given each piece before it leaves the factory.
The left side of the 16-valve D-O Fronty has four intake ports.

The 16-valve Fronty head, Model D-O, was introduced in 1924. The first real test was, again, Indianapolis. Three Fords had been entered; one with the new D.O. 16-valve head. They were outclassed but did finish 14, 16, and the D.O., 17th place.

This model Fronty is the dream machine of the '20's.

Every young man building a hot T believed that with a 16-valve Fronty he could rule the world.

In its assembled form, with the gleaming polished aluminum cam covers, it is one of the most impressive sights in all the world. It was to set a lot of records in the next half-dozen years.
DEALERS—HERE IS A REAL JOB THAT SELLS AT THE RIGHT PRICE—AND OFFERS PROFITS THAT ARE RIGHT

In perfecting the RAJO every peculiarity and feature of the Ford engine design was taken into consideration. It meets every requirement of the present day low-grade fuel, and increases the motor's flexibility under all operating conditions. The RAJO construction assures complete combustion, and reduces carbon accumulation to a minimum.

The RAJO valve in head type of motor secures a maximum operating efficiency from the Ford motor, and has proven its superiority for ease and quickness of running, speed, and acceleration, exceptional power, quick pick-up and real economy in gas.

Nothing need be done with the present Ford engine, except to remove the head, and install the RAJO in its place. All fittings are interchangeable with the standard Ford head.

The RAJO makes starting easy in all kinds of weather, and the motor can be throttled down to 3 to 4 miles an hour on high. Due to the extraordinary power, hills can be negotiated with perfect ease.

Every Ford car owner in your territory is an interested prospect. You can make big money selling the RAJO. We positively guarantee to refund the purchase price to anyone not entirely satisfied with the RAJO after it has been given a 10 days trial. Write for full particulars today.

Jobbers: Write for Complete Details.

Trindl Sales Corporation 614 24th St. Chicago
The Model 30 has a single set of 1/2-inch pipe thread spark plugs on the left side.

The original model of the RAJO head became known as the Model 30. It has a single intake port and four large exhaust ports, all on the right side of the head. A single set of 1/2-inch pipe thread spark plugs are on the left side.

While this was the original model, when improved models came out this was referred to as a commercial or truck head.

The right side has all the ports; four large exhaust ports and a single intake port in the center.

The first heads did not have the hot-spot bump on the left side, and the top of the head was round like the top of a loaf of bread. McVean and McVean, of Indianapolis, made an aluminum cover to fit the RAJO.

Care should be taken as this head is passed off at times as a Model C RAJO. Some number of ports but different functions. The Model 30 would not perform as well as the Model C.
The right side has the two intake ports and a shallow area for a row of short head bolts.

The RAJO Model 31 was introduced late in 1920; the first of the cross-flow heads. This is the head used by Noel Bullock in his 1922 Pikes Peak run for the championship.

The copy of the advertisement was supplied by Noel Bullock's daughter. Bullock received the ad when he ordered the head. Of the several Model 31 heads I have seen, I have never seen one with spark plugs on the right side as shown in the advertisement.

This model was discontinued when the Model B RAJO came out in early 1924.

The left side has the four exhaust ports and a single set of 18mm spark plugs.
Note These Rajo Features

An increase of from 8 to 14 horsepower; a speed of 60 miles an hour with a standard gear ratio; a pickup from 5 to 40 miles in 14 seconds and an average mileage of 25 miles in the gallon of gas. This is what the super-power of Rajo will add to your Ford.

Puts Your Ford in the Big-Car Class

The new "Model A" Rajo Valve-in-Head puts your Ford in the big-car class. With it you will know the joy of shooting up the steepest hills in high gear without pounding or heating; of pulling through deep sand, mud or snow with ease; of passing bigger, far more expensive cars on the open road; of having at your instantaneous command all the speed and power you will ever need.

Simplicity—Easily Installed

The new "Model A" Rajo Valve-in-Head is the simplest Valve-in-Head attachment ever invented. It has one-half less parts and can be installed without disassembling the car in any way.

Order Now—Be Ready for Summer

Place your order for the "Model A" Rajo now and be ready for the Summer tourist trails. Only in this way can you be assured of getting one in time.

RAJO MOTOR COMPANY
1954 Racine Street
RACINE, WISCONSIN

Rajo is built to provide ample water circulation around its double capacity intake valves. These valves being placed directly over combustion assure Rajo its wonderful power. A controlled hot-spot circulates hot air from the exhaust manifold around intake pipe and carburetor assuring unusual economy. All moving parts are enclosed under an aluminum dust- and moisture-proof cover. Rajo is a high-grade job in every way.
The left side of the Model A has a single set of standard Model T (1/2-inch pipe) spark plugs.

The "F" head, four-valve RAJO Model A was introduced in January 1923. It has two intake ports on the right, and uses the stock exhaust valves and ports of the Model T block. The head uses stock head bolts with the exception of the two under the rocker arm stands. The Model A is a good head for a speedster but could use larger valves and intake ports. The single valve per cylinder makes this head easy to identify. Spark plugs are 1/2-inch pipe thread.

4-Valve RAJO Model A owned by H. D. Thompson, Jackson, Tennessee. Also dual Winfield S.R. carburetors and Splidorf magneto.
The Model BB RAJO with modern valve springs.

Modern valves are installed here.

The left side of the Model BB has four exhaust ports and holes for a set of 18mm spark plugs.

The right side has two intake ports, and another set of 18-mm spark plug holes.
The right (intake) side of the Model BB-R RAJO. Notice the lack of the exhaust port between the two intake ports.

The Model B RAJO was brought out in January 1924. It, along with the Model A four-valve and the new Model C, was a part of a line of RAJO heads that had something for everyone.

The Model B, the BB and the BB-R all have the same port layout. The Model B has two large intake ports on the right and four exhaust ports on the left. The spark plugs are 1/2-inch pipe (standard Model T) and are located on the intake side. A flat boss is provided on the left side so that the head could be drilled for a second set of spark plugs. The Model BB had the second set of spark plug holes drilled, plus a higher compression ratio.

A competition only model, which I call the BB-R, had the same port layout but did not have the exhaust port (for intake manifold heating) between the two intake ports, and the two intake ports were larger than the Model BB. This was the hottest head RAJO built, and it could hold its own against any of the other brands.

The Models BB and BB-R used 18-mm spark plugs. If you have a head with 1/2-inch pipe threads on one or both sides, you probably have a Model B that has been re-drilled.

In some models of the Model 31, B, BB and BB-R, you might find roller bearing rocker arms. These are like a small rear axle roller bearing. While such an assembly was mentioned in the ads, most of the heads used a conventional bushing in the rocker arms.
YOU can have high price car performance with your Ford for only $69.75. Model C-35 eight Valve Rajo Head, is the result of eight years of manufacturing and engineering experience with overhead valve systems for Ford motors and is a combination of the outstanding features of previous Models. The recent installation of latest types of production machinery only have made it possible to quote this new and low price, making it the lowest priced quality Overhead Valve Equipment on the market today. Don't wait. Place your order today and be assured of prompt delivery.

There is no question that the Ford is the universal Car. The fact that there are more than 10,000,000 Ford users throughout the world—that about one-half of all the cars on American roads are Fords—is proof enough of this. The Ford car or truck goes and gets back. It is simple. It lasts. It costs less to buy, to run, to "keep up."

Now just think back on your Ford driving experience for a moment. How many times have you had to edge to the side of the road as larger, more powerful cars pass by—leaving you in a cloud of dust? Install a new Model C-35 Rajo Head and keep in the lead, on level roads or hills.
The Model C RAJO has a single set of spark plugs on the left side.

The right side has two small intake ports and three exhaust ports. Early models had the cut-away section on the side for short cap screws.

The Model C RAJO was introduced during 1922. It was known as the "Improved Rejo Valve-in-Head." After January 1924 it was known as the Model C. The Model C, along with the Model B and the Model A four-valve, became THE line of RAJOs sold until the end of the Model T Fords.
Model B-8 Valve Head

The famous Model "B" Rajo Head as shown below is especially designed for Police Departments, Fire Departments, Detective Bureaus and others protecting life and property, who require exceptional speed and power. Ford cars equipped with Model "B" Heads are indispensable for this class of Service.

Price Complete $100.00
F. O. B. Racine, Wis.

Our Policy

During the many years we have been building Rajo valve-in-head equipment it has been our firm policy to have all owners satisfied owners. We are ready to stand back of any claim or statement we make. Consequently, this policy makes for truth and modesty in our advertising and sales literature.

Rajo Motor Company
Racine, Wisconsin