

The Chalmers Automobile Newsletter

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This is the final newsletter of the three part series describing the Chalmers automobile production history. The two previous issues (May and July) reported on the "Forty", "30", & "36" model series; and the "Six", "Master Six" & "Light-6" model series (respectively). This issue will focus on the "Six-40" and "Six-30"/"Y" model series. I have not received any comments or corrections from the July issue, but your contributions are always welcome. The more accurate this information becomes, the more valuable it will be for future restoration projects.

The "Six-40 and "Six-30"/"Y" Model Series

Under the direction of a new chief of engineering, C. C. Hinckley, Chalmers offered its first overhead camshaft engine. This six-cylinder engine was introduced on the Model 32-A "Six-40" in 1915. In 1916, an improved six-cylinder engine appeared in the Model 35-A "Six-30". By mid 1917 a one-model policy was adopted and the "Six-30" became the company standard model series. In late 1917, Chalmers car sales were declining rapidly, but improvements in other areas such as suspension, body style, and design continued. Two new devices appeared in 1918, which were designed to enhance engine performance in the presence of poor fuel. These new devices were the "Hot Spot" and "Ram's Horn". During the period from 1919 to 1923, Chalmers suffered financial problems, teamed up with the Maxwell Motor Company in an effort to solve these problems, and then was taken over by Walter P. Chrysler. The Chalmers name was discontinued in January 1924, when production of the Chrysler Six started in the former Chalmers plant. The early Chryslers reflect their Chalmers heritage.

The "Six-40" model series consists of models 32-A and 32-B. Models 35-A, 35-B, 35-C, and 35-D make up the "Six-30" series. Consistent with previous Chalmers nomenclature, the term in quotes represents the trade name and the number-letter is the model. When the 35-B was introduced with an increased wheelbase (see table below), it was sometimes called a "7-22". This referred to the 7-passenger body and 122 inch wheelbase. Conversely, the 35-A which was still in production was known as the "5-15" (i.e., 5 passenger and 115 inch wheelbase). Later in 1918 the "Six-30" model series included STANDARD

and SPECIAL designations. These designations were generally used for internal company purposes and not seen in advertising. Various production changes from a previously released model resulted in the term SPECIAL. STANDARD was then applied to the base model. Examples of the production changes that qualified for the SPECIAL designation are: introduction of "Hot Spot" and "Ram's Horn" (35-B), slanting windshield (35-C), and limited production quantity (35-D); see the table below. Details on the SPEEDSTER designation are described in the January, 1997 (volume 2, issue 1) newsletter. Finally in 1923, a new model was introduced as an "Improved Chalmers Six". The improved six, which is a derivative of the "Six-30" series, was called the "Y". It is unclear in the factory literature whether "Y" is the trade name or model; most likely it is the trade name. However, Model "Y" is commonly used today.

Model	Production Years	Advertised HP	SAE HP	Cyl	Bore (in)	Stroke (in)	Tire Size (in)	Wheel Base (in)	Code Letter	Car Serial Number Range
32-A	1915-?	40	23.4	6	3 1/8	5	34x4	120	CA	47500-49599
32-B	1916-?	40	23.4	6	3 1/8	5	34x4	124	CB	50600-55699
35-A	1916-?	30	25.4	6	3 1/4	4 1/2	32x4	115	DA	55700-75699
35-B STANDARD	1917	30	25.4	6	3 1/4	4 1/2	34x4 33x4 1/2	122	DB	75700-82000
35-B SPECIAL	1918-?	30	25.4	6	3 1/4	4 1/2	34x4 33x4 1/2	122	DB	82001-90000
35-C SPECIAL	mid 1917	30	25.4	6	3 1/4	4 1/2	32 x 4	117	DC	90001-94000
35-C STANDARD	1918-?	30	25.4	6	3 1/4	4 1/2	32 x 4	117	DC	94001-110000
35-D SPECIAL	?	30	25.4	6	3 1/4	4 1/2	33x4 1/2	122	DD	110001-110007
35-D STANDARD	1918-?	30	25.4	6	3 1/4	4 1/2	33x4 1/2	122	DD	110008-111000
35-C SPEEDSTER	1917	30	55	6	3 1/4	4 1/2	32 x 4	117	DC	111001-111025
35-C	1920-22	30	25.4	6	3 1/4	4 1/2	32 x 4	117	?	115001-200000
35-B	1922	30	25.4	6	3 1/4	4 1/2	33x4 1/2	122	?	200001-225001+
Y	1923	30	25.4	6	3 1/4	4 1/2	32 x 4	122/117	?	Y100-Y10399

The car serial numbers for Models 32-A, 32-B, and early 35-A is on a plate riveted to the right-hand frame side member under the front floorboard; and for Models 35-B, 35-C, 35-D and late 35-A it is on a plate attached to the left-hand frame side member in front of the radiator.

The "Six-40" Model Series

Models 32-A and 32-B use the first overhead camshaft L-head engine to come out the Chalmers factory. This engine appears to be very similar to the Weidely Motor Company (Indianapolis) overhead camshaft design, and thus may not be a Chalmers design. The transmission is mounted at the rear axle. Model 32-A has cantilever rear springs and

Model 32-B uses improved under slung semi-elliptic springs at the rear. For both Models, the side frame members are constructed from 1/8 inch thick, 6 inch wide steel. Body style for the "Six-40" series with 120 inch wheelbase includes Touring (5 passenger), and Roadster. The 124-inch wheelbase body styles are Touring (7 passenger), Roadster, Palanquin, and Victoria. By 1917, the "Six-40" was replaced with a new 122 inch wheelbase Model 35-B "Six-30", also known as "7-22" (with slanting windshield and double-cowl).

The "Six-30" Model Series

Engines for the Models 35-A, 35-B 35-C, and 35-D are an improved L-head six-cylinder with single block cast design. It has a reputation for running very smoothly. The crankshaft is balanced which contributes to the smoothness and allows high rpm. The Morse silent timing chain, introduced in 1918, made it even quieter. A disc clutch and three-speed transmission are mounted to the engine making it an integral unit design. Hotchkiss drive with semi floating rear axle suspended on semi-elliptic springs is employed. These models use an improved chassis made from a pressed steel frame. As this model series matured, additional improvements were made such as: new styling with lower silhouette and one-piece windshield, and disc wheels (demountable at the hub). The "Six-30" body styles consist of Touring, Roadster, Limousine, Town Car, Sedan, Cabriolet, Limousine Landaulet, Town Car Landaulet, Speedster, and Coach. Seating capacity ranged from 2 to 7 passenger depending on wheelbase and body style.

The Y Model Series

The "Six-30" engine was redesigned for the Model Y "Improved Chalmers Six" Series. Although it had the same basic specifications as the original "Six-30", the new single block casting incorporated advancements such as engine driven water pump and full pressure lubrication. Suspension and brake improvements consisted of new tension type rear spring shackles and Lockheed four wheel hydraulic brakes (a \$75 option); both of these were continued on the Chrysler Six in 1924. Model Y bodies with 117 inch wheelbase include Sedan Coach, Touring (5 passenger), and Roadster. The 122 inch wheelbase bodies included Touring (7 passenger), Sport Touring, and Sedan.

The "Hot Spot" and "Ram's Horn"

The "Hot Spot" and "Ram's Horn" are two mechanical devices developed by Chalmers to overcome a 26% drop in gasoline volatility

that existed in the teens and early 1920's. Built into the engine intake and exhaust manifolds, they work together to warm up the air-fuel mixture and properly deliver it from the carburetor to each of the combustion chambers. Exhaust heat from cylinders #3 and #4 supply heat to the "Hot Spot". Incoming air-fuel mixture passes through the "Hot Spot" and is heated up. At this point, "Ram's Horn" provides a short, smooth walled, passageway to each cylinder intake valve. To maintain an equal volume for all cylinders it necessary for "Ram's Horn" to provide equal length passageways to each cylinder. The physical appearance of this intake manifold resembles a ram's horn. Engines equipped with these devices were known as "Hot Spot" motors. The first "Hot Spot" motors were introduced on the 1917 Model 35-C SPEEDSTER and the 1918 Model 35-B SPECIAL. All models built after this came with "Hot Spot" motors.

That's all for now; please pass on your comments and suggestions for future newsletters. Your feedback on corrections or missing data in this three part series on the Chalmers production story will be much appreciated.

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