

# The Chalmers Automobile Newsletter

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This newsletter features the beginning of a series on the story of the Chalmers automobile. I have organized the Chalmers production into seven chronological groups, or model series, as follows.

- "Forty"
- "30" and "36"
- "Six"
- "Master Six"
- "Light-6"
- "Six-40" and "Six-48"
- "Six-30" (including Standard and Special models)

Within each group I will try to provide an accurate historical summary, technical data on the model series, and any interesting or significant model characteristics. Facts about the Chalmers models are difficult to nail down and my sources are not perfect. Therefore, I ask that you look for any errors or missing data and send comments back to help me keep the record straight. The story begins in this issue with the "Forty" and "30" (and "36") model series.

## The "Forty" Model Series

Late 1907 or early 1908, Hugh Chalmers acquired a substantial interest in the financially troubled Thomas-Detroit Company which he renamed Chalmers-Detroit<sup>1</sup>. The first car introduced by Chalmers-Detroit was the 1908 Model C "Forty". This car was essentially a 1907 Thomas-Detroit C "Forty"; a design and model name carry-over from the preceding company. In fact, the C "Forty" design goes back to the 1906 Olds Model "A" which was designed by Howard Coffin. He joined Chalmers after a stint at Thomas-Detroit.

The "Forty" model series is composed of the C "Forty", D "Forty", E "Forty", J "Forty", and L "Forty". The letter followed by the name "Forty" is the nomenclature most commonly used by the Chalmers factory literature for describing the "Forty" series; the letter denotes the model and "Forty" is the trade name. Models D, E, J and L progressively introduced higher horsepower, increased wheelbase and larger tire size as shown in the Table below. Body style for the entire series includes: Touring, Roadster, Speed Roadster, Pony Tonneau, Torpedo, Tourabout, Runabout, Limousine, Inside Drive Coupe, and Landulet. Not all ten body styles were available for

each model, however several different combinations were manufactured over the production life of the "Forty". The trademark color, Chalmers (Meteor) Blue, started with the "Forty" model series. Some early 1908 Chalmers-Detroit "Forty's" participated in car racing adorned with Thomas-Detroit medallions. Production ceased in early 1913.

| Model | Production Years | Advertised HP | SAE HP | Cyl | Bore (in) | Stroke (in) | Tire Size (in) | Wheel Base (in) | Code Letter | Car Serial Number Range |
|-------|------------------|---------------|--------|-----|-----------|-------------|----------------|-----------------|-------------|-------------------------|
| C     | 1908-09          | 40            | 36     | 4   | 4 3/4     | 5           | 34x4           | 112             | C           | 7000-7500               |
| D     | 1908-09          | 40            | 40     | 4   | 5         | 4 3/4       | 34x4           | 112             | D           | 8001-8499               |
| E     | 1908-09          | 40            | 40     | 4   | 5         | 4 3/4       | 34x4           | 112             | E           | 6001-6608               |
| J     | 1910-11          | 40            | 40     | 4   | 5         | 4 3/4       | 36x4           | 122             | J           | 6701-6999<br>1001-1700  |
| L     | 1910-12          | 40            | 40     | 4   | 5         | 4 3/4       | 36x4           | 122             | L           | 101-837                 |

The car serial numbers are located on a plate attached to the dash. Model J used two serial number ranges.

The engine is an L head, "over-square" design (except the C) with the four cylinders cast in blocks of two each. The crankshaft has three main bearings. A gear driven oil pump is located in the bottom of the crankcase which pressure feeds the three main bearings and splashes the cylinder walls for lubrication. Engines were manufactured by Continental, American and British Manufacturing Company, and Westinghouse Machine Company. Later, in 1911, Chalmers started building the greater percentage of the engines. The "Forty" engine has a bad habit of overheating due to an under size radiator.

A leather faced cone clutch is connected to a mid-car mounted 3-speed selective sliding-gear type transmission. At some point, the transmission case was redesigned to be oil-tight by placing the countershaft under the mainshaft (just the opposite of more common designs) with oil-tight caps placed over the countershaft bearing openings. Power is transmitted to the rear axle via a driveshaft with universal joints at each end. The rear axle is a Timken semi-floating type.

Both a foot brake and a hand brake are provided. The foot brake operates on the transmission and the hand brake operates on the rear drums.

### The "30" (and "36") Model Series

A new Howard Coffin design, the Model "30", was added to the Chalmers-Detroit<sup>1</sup> line in the summer of 1908. The Model "30" ranked among the finest cars manufactured in that year. It is a relatively lightweight car with a 30 horsepower engine and close-coupled body. One significant characteristic of the "30" series is the unit engine/transmission design. This design is a one-piece, cast, cylinder block with integral clutch and transmission case. Some of these unit engines were left over stock from

Thomas-Detroit and were built in Canada by the American and British Manufacturing Company. Another interesting design feature is the single pedal for operating both clutch and brake.

The "30" and "36" model series is composed of the F "30", K "30", M "30", 9 "30", 10 "36", 11 "30", 14 "30", 16 "30", 17 "36" and 19 "36". According to factory literature, the letter or number is the model and the term "30", or "36", the trade name. The "30" remained essentially the same, during its production life, with minor improvements as shown in the Table below. The "36" was introduced in 1912 providing a new long stroke, higher horsepower 4 cylinder engine. Beginning in 1913, nickel plate replaced brass trim and Gray & Davis electric headlights replaced gas headlights. Body styles for the series included: Touring, Roadster, Torpedo, Limousine, Limousine (Cab Side), Limousine (Berlin), Tourabout, Runabout, Pony Tonneau, Inside Drive Coupe, Landaulet, Torpedo Roadster, Coupe, and Delivery (exclusive to the Model 14). Over the production life of the "30" and "36", many different combinations of the 14 body styles and 10 models were produced. The Model 14 Delivery is the only truck type produced in the history of Chalmers. Racing versions of the "30" were very successful and led to a production and market penetration high point for the company. Famous "30" racers included the Blue Birds at Crown Point, Indiana and Old Number Five in the Glidden tours.

| Model | Production Years | Advertised HP | SAE HP | Cyl | Bore (in) | Stroke (in) | Tire Size (in)           | Wheel Base (in) | Code Letter | Car Serial Number Range |
|-------|------------------|---------------|--------|-----|-----------|-------------|--------------------------|-----------------|-------------|-------------------------|
| F     | 1908-19          | 30            | 24.03  | 4   | 3 7/8     | 4 1/2       | 32x3                     | 110             | F           | 9001-11501              |
| K     | 1909-?           | 30            | 25.6   | 4   | 4         | 4 1/2       | 34x3 1/2                 | 110             | K           | 11601-17125             |
| M     | 1910-?           | 30            | 25.6   | 4   | 4         | 4 1/2       | 34x3 1/2                 | 115             | M           | 101-4844                |
| 9     | 1911-?           | 30            | 25.6   | 4   | 4         | 4 1/2       | 34x3 1/2                 | 104             | H           | 18001-19252             |
| 10    | 1912-?           | 36            | 28.9   | 4   | 4 1/4     | 5 1/4       | 36x4                     | 115             | B           | 20001-24000             |
| 11    | 1912-?           | 30            | 25.6   | 4   | 4         | 4 1/2       | 34x4                     | 115             | G           | 27001-29166             |
| 14    | 1912-?           | 30            | 25.6   | 4   | 4         | 4 1/2       | 34x5 1/2                 |                 | T           | 4901-4950               |
| 16    | 1913-?           | 30            | 25.6   | 4   | 4         | 4 1/2       | 34x4                     | 115             | A           | 24301-25300             |
| 17    | 1912-14          | 36            | 28.9   | 4   | 4 1/4     | 5 1/4       | 36x4<br>36x4 1/2<br>37x5 | 118             | N           | 29500-33499             |
| 19    | 1914-?           | 36            | 28.9   | 4   | 4 1/4     | 5 1/4       | 36x4                     | 118             | P           | 29500-33499             |

The car serial numbers for Models F, K, M & 9 are located on a plate attached to the dash; and for Models 10, 11, 14, 16, 17 and 19 it is on a plate riveted to the right hand frame side member under the front floor board.

The F-head, unit engine has a crankshaft with 3 offsets and two sets of main (ball) bearings, so the 2<sup>nd</sup> and 3<sup>rd</sup> piston connecting rods shared one long crankpin. This results in a short, stiff crankshaft that provides high reliability under hard running conditions. Dual ignition is employed with one set of spark plugs connected to coils (one for each spark plug) and the other set connected to a Bosch magneto. All engines have overhead intake valves fed by a Mayer carburetor (early models) or a Rayfield

carburetor (late models). The intake manifold is part of the water jacket so that the air-fuel mixture fed to the carburetor is pre-heated.

Bolted onto the engine are the clutch and transmission making an integral unit. The clutch is a multiple-disc type with 15 steel and 16 bronze alternating plate sets running in oil. The Model "30" has a 3-speed (plus reverse) selective gear transmission connected to a driveshaft and full-floating rear axle. The Model "36" is equipped with a 4-speed transmission.

A foot brake is incorporated into the single pedal clutch/brake mechanism. Depressed halfway, this pedal releases the clutch; then beyond that point it starts to contract a 3-inch Thermoid-lined band on 7-inch drum mounted to the driveshaft. The hand brake expands internally on a pair of 14-inch drums at the rear wheels; unlined cast iron against steel. The "30" also had a "ratchet sprang" which could hold the car on an uphill grade without the use of engine or brakes.

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<sup>1</sup>The company name changed in 1910 when Detroit was dropped from the name, although the Chalmers-Detroit car medallions continued to be seen on production cars until 1911.

That's all for now; the next newsletter will feature the beginning of the 6-cylinder model series. Please pass on your comments and suggestions.

Dave Hammond