CHEVROLET CASTING NUMBERS 1924 TO 1928

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1924 to 1928

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N.B., The references below to "Hendon" is to the General Motors Assembly Plants at Hendon, London N.W.9. England. The reference to "cwt." is for "Hundredweight", with 112 lb. to the cwt., and 20 cwt. to the Ton. The British series S Truck was a locally assembled Utility Express ["U.E."] Series M, itself an interim model of Series H chassis and Superior Series K motor.

References to "l.h.d."/ "L.H.D." and/or "r.h.d." /"R.H.D." are in respect of "Left-hand drive" and "Right-hand drive" respectively. "C.K.D." stands for "Completely Knocked Down" crated components. "S.K.D." represents "Semi-Knocked Down" and "S.U.P." "Single Unit Packs" [complete cars/trucks].

FOR THE AVOIDANCE OF CONFUSION: "T" was a "Truck" motor prefix; "R" "Right-hand drive" motor prefix, and combination of "R" with any other prefix indicated a "Right-hand drive" version of the Left-hand drive motor with that same prefix. As I do not wish to spoil the story, I refrain from commenting further on other prefixes: see below. **All motors were prefixed "T" or "R", etc. in front of the sequential engine number when I refer to "ENGINES: #" below except where stated.**

1. 1924 Cylinder Blocks as used in either U.S. or Canadian motors used a Block Casting Code of # 327773 and Head Casting Code of # 327772 until the end of Superior Series F, H and Canadian "SM" prefixed motors. 1924 U.S. Blocks were sourced from either Saginaw Products Company or FERRO {see below]. Oshawa, Ontario-sourced Superior Serial # B44617 [note no "9"] has Engine # SM14908, Block cast # 327773 HW and 5 15 24, May 15th., 1924. An original General Motors Limited imported r.h.d. car had Engine # SM11961, with # 327772 and # 327773 cast marks, cast by **Hiram Walker Metal Products Limited of Walkerville, Ontario**, and a Block Cast date of 22-8-24 However, R1,528,991 has # 327773 L-17-3 Block for December 17th, 1923 and SPC5 plus # 327772 Head cast date B-29-4 H 5 P1 for February 29th, 1924, this being a RHD, **Australian** car with # "1528991" stamped on the exhaust. Engine # R1,528,991 had a block that was cast in December 1923 – not 1924!! Ken Kaufmann says *"I remember this car well and I double checked it several times, but it used a block that was sitting in a corner for 8-9 months. This touring was a very original car and I was surprised that it was missing its Car # Plate, but I got an idea it was never installed by the NSW distributor John McGrath. Instead it has a # 2272 stamped in the wood on the right hand seat frame. It is not known if this is a Holden Body # or this # was stamped on by McGrath after he assembled the chassis from a CKD unit from Bloomfield? I believed McGrath did assemble CKD units in NSW like Cheney did in VIC, and Mann in S.A. The # 2272 was also stamped on the top of the cylinder head, which leads one to think it was a ID # assigned by McGraft. Of course, this being a CKD unit, it would not have had a USA style name plate and the local assembly plant was free to assign any type of serial # he wanted. This makes sense to me. At one time this tourer could have had a McGraft name plate attached to the instrument board like I saw Cheney. One more thing, I originally recorded this head's casting # as H **S** P1 and noted the S could be a "5" The more I think about it, perhaps the "S" is more*

correct! The last Flint use of the Homes Foundry [Romeo later Holmes Foundry, Port Huron, Michigan] in my database listing is cast # H4 P12 in April 1922, with a Holmes P 2 head. It seems Holmes did not use the Hx Px combination on heads like it did blocks. I can't explain why the Romero/Holmes Foundry used both the H and P codes, but I know they were the only other Foundry use between 1915—19 other than DF and FMP. So what I am saying this 1924 Head with a cast code of HS P1 is the same as the HS P1 cast code used on the CP built engines built in 1921-22 with a Canadian cast head! The H 5 P1 just does not fit in both in time and sequence. The U.S. Hx Px code, the "P" number always increased as the "H" did – like H3 P12 and did not start over at P1 when the Hx number was increased one number.

To fix the date of the last 1924 Block, take the case of the highest known # for 1924 which listed as # R1,537,322 which is a flywheel only but this flywheel has a date code of October 9, 1924. The last cylinder Block was probably cast about October 15th, with motor assembly about two weeks later and the last Closed Model Fs being assembled in the first week of November 1924 before the shutdown for the start up of the K motor. We also know from "restricted" GMI record of Flint production for Dec 31, 1924, that 588 1925 Superior K were built at the end of December 1924, that must have used blocks cast in November, 1924".

ENGINES: # M-1 to # M-26,815 [or "R" instead of "M" for "Right-hand drive"] then # 1,214,110 [U.S.] to # 1,538,962 and # SM[T]1 to # SM20190 [Canadian]. "SM" *may* have referred to Saginaw Motor Plant, i.e. a contracting out of assembly by the Canadian Products Division of G.M. of Canada in Walkerville, Ontario. It had nothing to do with the "M" prefix of Flint Motor Plant, nor was there any "R" prefix for the "Right-hand drive" motors. "SMT" has been seen but generally "SM"-prefixed "Truck" motors had plain "SM" prefixes.

2. Cylinder Blocks for 1925 Model motors were cast from early November 1924 on [by SAGINAW PRODUCTS COMPANY, Saginaw, Michigan ["S.P.C"]. and FERRO MACHINE AND FOUNDRY COMPANY, Cleveland, Ohio ["FERRO"]: see note below], with motor assembly about the first week in December. These very early Blocks were used in motors from Engine # 1,538,964 to # 1,549,060 inclusive, possibly being assembled in the last week before the Christmas break and then in turn in in cars assembled from, at the latest December 28th 1924. These first 10,367 units used Block PART # 334653 [Cast # not yet known] and were installed exclusively in the Superior Series K cars and light delivery chassis up to January 15th. Motor start-up at Flint during the month of December would have been much less than the full production rate of 3,000 per day. This Block was used in the first three weeks' production of Series K chassis, for all assembly Plants, in order to get a model into every showroom by January 15th, the New York Show date. There was then a shutdown of the Flint Motor Plant for two weeks to allow old stock to be sold off, and to also allow for the improved Block to get into production before the series production of Series K, was under way, and then Series M Utility Express ["U.E."]. Total January production was 18,292 cars, so this must be correct.

ENGINES: # 1,538,963 onwards

3. From Engine # 1,549,061, Part # 344671, Casting # 344624 was used in the Superior Series K, the Utility Express Series M from February 1925, and the Hendon, London, England-assembled 1-Ton Model S of May? 1925, followed by the Utility Express Series R until December 1925. The Series M U.E. production was delayed because of the need to clear out old stocks of U.E. Series H chassis. This # 344624 Block is considered to be the strongest 4-cylinder Block for racing since it has a web-supported centre main bearing along with a disc clutch. Whilst motor production was under way, from August 15th, the "1926 Model" or Late K with the front light bar, and the U.E. Series R were introduced, though motors were produced up to August, at just under # 1,900,000, and then stopped, restarting in September after a six-week gap, with Engine # 2,000,001 [to add credence to the marketing fable of "two million units sold"]. The last known Model S motor was # 1,664,780 and the highest known Hendon-assembled Series M motor was # 1,671,041 assembled in May 1925. Motor production

continued from then on until the end of the year. However, on August 1st 1925, the "1926 Model" or "Late K" with the front light bar, and the new U.E. Series R were introduced **(The change-over to the Late K and U.E. Series R was at around Engine # 1,829,000 we think)** though motors were produced for both car and truck series following on with the same sequential numbering system into September until the numbers reached a point around September 15th 1925. However, it would be helpful to have more block date codes to pin point this date, to determine the exact Engine # at just under # 1,900,000, when the sequence was terminated, and also to confirm the date. Flint motor Plant then started the new day's assembly with a new sequence starting with Engine # 2,000,001, having missed out just over 100,000 numbers, to add credence to the marketing fable of "two million units sold". The last known Model S motor was # 1,664,780 and the highest known Hendon-assembled Series M motor was # 1,671,041 assembled in May 1925. The earliest U.E. Series R motor was # 1860140. The highest known Series K motor before the "gap" is # 1,892,820, and the highest # 2,070,863. The earliest known motor after the number jump in September was fitted into a Hendon-assembled Series R, # 2,001,067, assembled on the day that the new sequence started, along with # 2,001,116. However, the chassis with the highest Engine # s were registered well into 1926, as late as March or April, some time after the new 1926 Series had been launched in North America. An example of a U.S. light delivery chassis is Car # 6K45276, with Head Cast # 344624 with a Date of J-28-25 cast by Ferro: see below, and Engine # 2,128,866. The Head, Cast # 344128 was cast by S.P.C. J-12-5, October 28th and 12th, respectively, 1925.

Ken says: As mentioned below the intention was to ship the last of the Model Fs by November 15th, which seems to confirm that the last Model Fs were indeed assembled by the first week in November. The Model S series, all 365 or so, used motors built in April 1925 and were shipped as CKD crates from Bloomfield in the first month of production, amongst kits for GM International, Copenhagen. 1,392 units were shipped in May, the first being for Copenhagen. These Model S One-ton trucks must have used the series M chassis, i.e. the H chassis with the improved 1925 motor/gearbox and transmission.

ENGINES: up to # 2,160,735

The General Sales Manager of Chevrolet Motor Company of Detroit, wrote to all dealers on February 23rd, 1925. The company, he said, had in the various Zones a number of {quote} "F" models. It was the original intention to ship these cars to dealers to their schedules before November 15th, 1924, but it was decided not to do so as it was felt that dealers might then have too many unsold models on their hands at the time of the announcement of the new models. Sufficient initial deliveries of the new models had been given to dealers well in advance.

Under the conditions, and on the basis that the company were trying to firstly relieving dealers having to finance these old models and the storage problems that would have been required, the unsold cars were decided to be stored in warehouses by the company. Now that the sales season was approaching, the company wanted to move the old stock as fast as possible and with the minimum of cost, etc. The GSM was asking all Sales Managers to allot these cars to dealers in proper proportion to contracts and with due consideration to the conditions surrounding dealerships. The company wanted to move all remaining "F" models to dealers for sale as soon after March 1st as was practical.

Very shortly one of the representatives would be calling on dealers to present a plan for handling these models, and in doing so would state how many were available and how many the dealer was expected to take. The company had endeavoured, he said, to handle the transaction in such a way as to give the dealers' interests the very best of consideration, and hoped that each dealer would give his full co-operation in the final clean-up of the stock of "F" models in as short a time as possible.

NOTE: Ken Kaufmann has seen around half the Blocks cast in 1925 were in fact produced by FERRO MACHINERY & FOUNDRY COMPANY, Cleveland, Ohio. It was reputedly better cast than the SAGINAW PRODUCTS COMPANY, Saginaw, Michigan Blocks, since casting shifts have been found

in the S.P.C. castings. When boring oversize, the cylinders have been found not to be on their true centres, and machining has resulted in break into the water jacket requiring a liner. Ken comments: “Of course the "spread" between cast date of block and the vehicle being driven off the assembly line is greater in Oakland (12-15 days) and Canadian plants because of distance (Walkerville was only a day away) I agree that R engines would have even a larger spread because of lower production and batch shipments.

4. From January 1st 1926, the Superior Series V and the Utility Express Series X were introduced. The first 1926 Model motor was # 2,160,736, which must have had a Block cast in mid-December 1925, depending on when the Christmas break was taken. Hendon-assembled Series X # X8069 was registered on May 19th, 1926 and had Engine # RT2,165,835: this is the earliest known motor in a Hendon-assembled Series V or X. Ken Kaufmann’s 1926 Superior Series K Car No. 6Vxxxxxx, i.e. a 1926 Model Superior Series V had an Engine # 2,216,116 with a Block Cast date of A 18 6 for January 18th, 1926, “S.P.C.” cloverleaf for Saginaw Products Company, Saginaw, Michigan, and the Cast # 345505 with an “11” underneath. This was the 1926 Block, Part # 345504, which was introduced for the 1926 Superior Series V and the Utility Express Series X, rated at 20/25 cwt in Britain. The new motor had a belt-driven Remy generator instead of a gear-driven one and a centre-mounted camshaft-driven oil pump/Remy Distributor that weakened the centre main bearing support. The ***Chevrolet Service Bulletin No. 17*** of July 20th, 1926 announced that the Block # 345505 was used up to Engine # 2,249,424 and then from # 2,249,601 to # 2,252,175 [which represents approximately 10 days to two weeks of engine production] inclusive With the change in models from the Series K and R to the Series V and X, the radiator had to be changed as the inlet for the 1925-6 Series motor was on the left side and that on the 1926 Series V and X had an inlet on the right side instead." The Blocks used in the # 2,249,425 to 2,249,600 [i.e. 176 units that must have been a pilot batch of # 346709 blocks] "exception motors”*. must have been cast before 1st February 1926: there is no evidence that any of these motors were shipped to Hendon Plant. An example of an early 1926 Model Block from New Zealand is Serial # 2K52402 which has a non-original Engine # R2,181,074 and a Block Cast # 345505 12". This is a "1926" Series K, ex-Tarrytown, NY SUP, and would originally have had an Engine in the post-September 1925 series # 2,000,001 to # 2,160,735.

* Ken comments that the 176 “exception” motors must have been a short pilot batch of the new # 346709 block casting [see 5. below], from Engine # 2,249,424 to # 2,249,600 - built approx the 1st week in February 1926 with full switchover to the # 346709 block casting occurring most likely about 10 days to two weeks later - on or about February 15 1926.

ENGINES: # 2,160,736 onwards.

5. At Engine # 2,249,425 with components cast in late January 1926 for say the second week in February 1926 assembly, *[Ken Kaufmann’s 1926 Engine # 2,231,827 had a date code of A-25-6, and with # 2249425 being 17,598 units later, would place the assembly of # 2249425 into the first week of Feb 1926]* a new Block casting was introduced, again for 1926 Series V and X models, excluding the “exception motors” just mentioned. This new Block was Part # 346716 [in the February 1st 1928 Parts List Part # 343993] and Casting # 346709. These Blocks were cast by S.P.C. and also by FERRO, from the end of January 1926, save for the “pilot build” for the “exception motors” just mentioned. Another Oakland “Superior K Model V” Superior K Model # 6V22513 Engine Block cast number 346709, Engine # 2,502,595. An example of a Canadian car is # V109548, with Engine # 2,292,576, Casting # 346709 and Date of March 3rd, 1926, though with no known S.P.C. marks. Oshawa were building 161 vehicles per day in March and built 10,352 vehicles from January through March 1926. Superior Series V # 113765 had Engine # 2,368,982 has a Date Code of April 8th, 1926, and Cylinder Head Date of D-

7-6, April 7th, 1926 and cast by S.P.C.. The only known Hendon 1926 Superior Series V Engine # is R2,575,887, as fitted to # V75147 with a motor built in June 1926.

What was the difference in the two Blocks? The easy identifier is that the earlier Block Part # 345504 had the water pump cap screw holes off-centre, intended for Water Pump Part # 343147 whilst the later Block Part # 346716 had cap screw holes centred, i.e. at E-W, N-S positions, and the Pumps in each case had screw holes to match up so that the Pumps had to be correct for the Block.

6. There was a change associated with the annual signing of Dealers' contracts on August 1st, 1926, which was at roughly the return of workers from the summer break: whilst there was a Plant shutdown at Flint, there was a halt in assembly. Flint-assembled Superior Series V Landau # 1V48289 was assembled possibly on the last day before the shutdown in July 1926, with a Cast Date of G-29-6, July 9th, 1926. The Engine # is 2,597,892, Block Cast # 346709 and Cylinder Head # 326849 allegedly, though this is in fact the water outlet casting number! The change-over to "1927" Model Superior Series V and U.E. Series X was therefore at around **# 2,605,000**, depending on when assembly started, with the **first Monday in August being the 2 nd**.This takes into account 5,000 motor units assembled by Flint at the very end of the season for export and for Plants other than Flint where there were longer delays between motor assembly and installation in the vehicle. There was NO change in the Block casting this time: the Block was # 346709 as before, though this is often quoted as "348709" as the "6" looks very much like an "8". However, there really was no major external difference between the 1926 and 1927 Models: it was more of a marketing exercise. The "1927" Models [actually Sales Year] or late 26 had a rear stop light plus in the cars/light delivery chassis, a Transmission support attached to the side rails, plus the spark and throttle controls placed inside steering column centre [the latter point will be significant later]
The highest known Engine # in a Hendon-assembled chassis, is # RT2,865,364.
ENGINES: up to # 2,874,998 except for # 2,876,001 to # 2,882,550 inclusive.

7. The new 1927 Capitol models were launched on January 1st, 1927, and the previous Block Casting # 346709 was retained, though the Capitol series motor assembly started in early December 1926 [the date depends on the Christmas Break] at Engine # 2,874,999, with castings produced from around 23rd November 1926? onwards, for motor assembly between 2-3 weeks later, and then installation in chassis ready for the New Year Dealer launch. Canadian truck unit # 2,913,021 has Block # 346709 and Date of L-8-6 for December 8th, 1926, cast by FERRO. Hendon-assembled truck LM15451 had an Engine # between # RT2,932,700 and # RT2,937,400 [about two days' assembly apart], but had a Block # 346709 and a Cast Date of L-16-6, i.e. December 16th, 1926. LM15971 had an Engine Number of approximately # RT3,037,800, and a Cast Date of A-10-7, for January 10th, 1927. Take in Coupe # 3AA26603 from the St Louis, MO Plant, with Engine # 3,036,813 and # 346709 Block, with a motor possibly built the same day as LM15971. A Truck motor as fitted to a 1926 Model Truck in Norway is Engine # T3,045,920 with the Block casting # 346709, and cast date A 28 7, January 28th 1927, the serial number being XB 2778 [GM International, Copenhagen assembly]. Another Norwegian example is # 3,146,563 with the 346709 Block and Cast Date of C-14-7 March 14th 1927; the Serial number is XB-AA3123. This is a combined car/pickup bodied in Norway. The Capitol series for 1927 Series AA car and light delivery chassis [10 cwt/ Half-Ton capacity] and the Series LM truck chassis. However, a known motor in the U.S. has Engine # 2,955,078 with Casting # 346709, and a Date of A-1-27, for January 1st, 1927. This Block was cast not by S.P.C. but by FERRO. Examples of other 1927 AA Series motors are Hendon-assembled chassis, AA90256 with Engine # 3,065,078 with a Cast Date of B-15-7 February 15th, 1927. Canadian chassis with Engine # 3,080,498, Cast Date B-21-7 for February 21st, 1927, Engine # 3,146,203 cast # 346709 with the last numbers obliterated by welds as originally installed in Coupe # 167730, and Engine # 3,381,023 assembled in late May. There seems to have been a gap in deliveries to Hendon for Series AA chassis from around # R3,300,000. An example

of a U.S. car is Ken Kaufmann's 1927 AA Coupe, assembled in the Oakland, California, Plant with Engine # 3,345,324 with a Block and Head Cast Date E-2-7, May 2nd, 1928, the engine being assembled a few days later and the car sold June 16th. The Head has the S.P.C. Cloverleaf symbol and a manual Distributor.

8. On June 7th 1927 there was a change in Cylinder Head to the 32 b.h.p. type as mentioned below, at Engine # 3,409,976 **except for Engine # 3,410,101 to # 3,415,520*,** the motors having a new type of Delco-Remy semi-automatic Distributor [mechanical flyweight as against a spring advance] which was mounted as before but required a different method of timing, as well as a change to a larger Carter carburettor, a Carter C-RJX-O, as compared the previous model 1 inch C-RX-O [with a "C" prefix cast in indicating manufacture at the Bay City, Michigan, Plant as against the St. Louis, Missouri, Plant]. Associated with the new carburettor was an "Autovac" fuel feed to the carb, which in the U.S. was the Steward-Warner vacuum tank that used a connection off the updraft intake manifold, though throughout 1927 car/l.d. and truck chassis were equipped by Hendon with the manual spark control underneath the steering wheel. The Block # 346709 continued as before. An example of this new Head is a Buffalo, New York-assembled 1927 Sedan, 12AA60722, Engine # 3534462, Block Cast # 346709, F-25-7 for June 25th, 1927, Job # 7210, Body # 8868, with a reputed Head Casting # 354939, although this is in fact a water outlet casting number or other part and not the Head casting # !.
***The "exception" motors, Ken suggests, were for export only, rated at 30 b.h.p, with the smaller valves. This seems to be correct: Hendon-assembled LM17145 had Engine # RT3,414,189. The gap in Series AA motors seems to have ended with # R3,520,000 or so, when the 32 b.h.p. motor was on stream. The February 1st 1928 Chevrolet Master Parts List confirms that these "exception motors" were Capitol Series LM motors**

9. With the annual Dealer contracts being renewed in August 1927, there was a marketing change from August 1st of what were titled "1928 Models", or "Late 1927" Models, Series AA and LM. Ken Kaufmann's 1927 Coupe had a "FERRO" Block and Engine # 3,802,580 with a Cast Date of I-30-7 for September 30th, 1927 and although it was sold in the 1928 SALES YEAR it was identical to the 1927 Models. The Block Casting # continued as # 346709 right up until the end of 1927/8 production. Ferro had supplied Chevrolet with castings until Chevrolet Division took over the Saginaw Products Company plant in the Autumn/Fall of 1927 and renamed it the Chevrolet Gray Iron Foundry and introduced the first design of Chevrolet bow-tie into the castings. 1928 castings therefore had the Chevrolet bow-tie. 1928 Sales Year motor production started at around # 3,557,001, depending on when the summer break ended: the **first Monday in August was the 1st**. The official start of 1928 motor production started with # 3,863,596, 1927/1928 Sales Year Capitol Series AB and LM motor production ending with # 3,863,595. At some point around Engine # 3,862,000, or about 1,100 motors before, the right-hand drive Truck engine prefixed changed from "RT" to "TR" **which was intended to signify the LO/L.O. series 2-port Head motor.** However the earliest known "TR" motor was Engine # TR3,862,487, and this was not a registration mistake. Two known Hendon-assembled "1928" LM trucks were registered well into January 1928, and had an official increased capacity of "25 cwt", which was an increase from the Series S to R 20 cwt/1-Ton, then the Series X to 1927 LM 20/25 cwt. The two LMs mentioned had Cast Dates of J-17-7 and J-20-7 for October 17th and 20th 1927 respectively, which were right at the end of 1927/8 Capitol engine casting. The new prefix indicated that the motor had the new 35 b.h.p. engine, with a two exhaust-port Cylinder Head, and a new 2-pipe exhaust manifold, larger valves and increased valve lift, but in the U.S., the new motor was accompanied by a larger radiator for the Series AB cars but not the trucks. It seems that a few thousand, or less than a day's production, motors from the shutdown for re-tooling, a batch of 35 b.h.p. motors were shipped to Hendon and installed in the last of the LM chassis from January 1928. This would tie-in with the November 1927 Commercial Motor Exhibition in London at which large numbers of new trucks for 1928 would have been ordered. However, the summer and November 1927 G.M. Limited [British]

Brochures show that the trucks then being assembled and sold had 32 b.h.p. motors, but no mention is made of the power rating of the ½ Ton chassis. The AA chassis used manual spark control. They may have in fact been fitted with cast iron pistons as per the truck engines. Ken suggests that there was a shutdown of a few weeks at the end of October 1927 to tool up for the new 1928 2-port motor, and then re-started December 1st with the assembly of motors for series AB/A.B. cars that started assembly 2 weeks later. Hendon had run out of motors, or were satisfying 1928 Model orders from the Exhibition and so the first batch of motors starting December 1st were shipped to England for assembly by Hendon in the last of the LM chassis. Of course the Capitol model continued into 1928 year for the Utility Express, which was rated at One Ton capacity in the U.S. and Canada, but at 25 cwt in the U.K. There seems to have been a lot of confusion about this, and it is often thought that the 1928 U.E. trucks were renamed "National" Series, as per the Series AB car and light-delivery/half-ton chassis [called the "National 10" on Hendon build plates]. The reason for this Capitol carry-over, is that the styling of the front sheet metal, radiator, and chassis frame did not change for the Capitol Series LM, LO, LP models. That is the LO and later LP were NEVER designed for the new six cylinder engine which the National AB models were with the increased radiator capacity and long bonnet! Having said that, Hendon were able to tailor-make chassis to suit requirements and a larger radiator and six-wheel conversions or chassis extensions were available through Dealer orders. The six-wheeler was then rated at 30cwt or 1½ ton capacity which would require the 35 b.h.p. motor and also perhaps a larger radiator which could have been British-sourced. However, there is evidence that despite the use of the 35 b.h.p. motor, there was still a 32 b.h.p. motor, which must have been an option: the unit using cast iron pistons with 4.3:1 Compression used in Heavy Duty truck applications to prevent a scuffed piston in the event of overheating on long hills and gradients. Ken suggests that the domestic market trucks used a 32 bh.p. motor because the radiator and surround were unchanged from 1927 to 1928.
ENGINES up to # 3,863,595.

10. On January 1st, 1928, were announced the new National Series AB and Capitol Utility Express Series LO Canadian Series A.B. and L.O. with full stops after each letter], a running change from the Series LM, with the same 3-speed gearbox. The final **type** 4-cylinder Block, Casting # 348532 was introduced for 1928 Model National and Capitol motors which started with Engine # 3,863,596,[castings being produced from the last days in November 1927 until November 1928] with the 35 b.h.p. motor two-port Head, a revised Carter carburettor RAKXO or C-RAKXO, and in the case of the Series AB only a larger radiator and shell than the Series AA. An early example is Ken Kaufmann's 1928 Coach, Serial # 6AB5401 built around January 12th, 1928 with Engine # 3,910,033 with a Cast Date L-5-7, December 5th, 1927,and a Head from Engine # 3,948,368 Date A-6-8, January 6th 1928, and Block from Engine # 3,958,611 with Date A-23-8 for January 23rd. A Cylinder Head from Engine # 4,117,438 is dated B-20-8 for February 20th, and a Block from # 4,098,681 dated B-21-8 for February 21st 1928. A Block from # 4,216,578 is dated C-14-8 for March 14th; Head from # 4,356,175 is dated D-11-8 for April 11th 1928.

EXPORT MOTORS:

An example of an export motor is that installed in a 4-door Sedan assembled in NZ, # R3,999,684 with the # 348532 Block, Bow-tie symbol, then 16, and Date Code A-19-8 for January 19th, 1928 [this would have been delivered to Oshawa, and is of course a Right-hand drive motor consequently the dates do not tally with U.S. l.h.d. motors]. However, in Australia, G.M. (Australia) Pty. Ltd installed cast iron pistons in the truck motors so that the smaller radiator could cope with the derating to 31 b.h.p. @ 2,200 r.p.m. In the UK, a need to uprate to a more competitive 25 cwt. Capacity and the more temperate climate allowed the use of alloy pistons and the full 35 b.h.p. motor was installed with the smaller radiator. With the change to Series LO/L.O. truck chassis, the export right-hand drive "Truck" motors assembled in Flint Motor Plant switched to a revised "TR" prefix, whereas of course the right-hand

drive equivalents of the "T" prefixed motors had been "RT" up until the end of Series LM/L.M. assembly. An example of such 1928 LO series r.h.d. motors are: Hendon-assembled LO40029, Block Casting # 348532 with a motor in the region of # TR3,866,000, registered March 2nd, 1928. An example of a l.h.d. export motor by comparison is that installed in a Brazilian 1927 truck: # T4,182,419. # 348532 12 B-8-8, February 8th 1928. A Brazilian 1928 pick-up had # T4,471,028 # 348532 16 E-7-8, May 7th 1928.

XR: rare beasts!

The "XR" prefix on motors fitted in the majority of Hendon-assembled Series AB ½ Ton Chassis after about Engine # 4,115,000. Prior to this change, AB commercial chassis [not the cars'] used "R" prefixes only: see below]. This eXport Right hand drive engine must have used the 31 b.h.p. [rounded-up to 32 b.h.p. in the UK brochures] version of the 2-port engine, but with truck-style cast iron pistons and the 4.3:1 Compression ratio rather than 4.5:1. This motor was it seems optional on the trucks sold in Scotland for instance, and perhaps Wales, with mountain climbing requiring a cooler-running motor with the small radiator. The 1928 Scottish Show catalogue states that the truck on display had a 32 b.h.p. motor, and it is suggested that this was the same unit as the "XR" prefix National 10 chassis. Perhaps it was thought that the stop-start regime and three-speed gearbox of the light commercial chassis was too much for the car 35 b.h.p. unit? An example of a Hendon-assembled Series AB is AB92050 registered October 10th 1928, with Block # 348532. The motor would be in the region of # XR4,800,000. Compare these with a New Zealand assembled Series AB, XHAB10269 with Engine # XR4,843,784 which has a two-bladed fan and two-port head, and # R4,837,784, Cast Date H-2-8 for August 2nd, 1928. These were assembled by Flint a few days apart! Even closer together was British AB Light Delivery # AB92143, which had Engine # XR4,843,699! This was assembled a matter of minutes away, and probably delivered to Bloomfield in the same train although one went across the Atlantic and the other the Pacific! Contrast this with New Zealand-assembled LP truck which had Engine # TR5,016,562, Cast Date I-12-8, September 12th, 1928. However, as with New Zealand not all of the export r.h.d. Series AB chassis used the "XR" motor. S.U.P. Tarrytown export to the UK Car # 2AB60021 was fitted with Engine # R3,903,693 [Flint-assembled motor from February? 1928]. Light Delivery C.K.D. chassis from Bloomfield Boxing Plant motors Engine # R3,877,457 to # R4,117,025 are known, with possibly the higher compression Head, whereas motors Engine # XR4,146,254 to # XR5,051,104 are the lowest-to-highest known "XR" prefixed motors. The former was assembled in Flint motor plant in early March 1928, whereas the latter is close to the end of 4-cylinder motor assembly at Flint.

ENGINES: # XR4,146,000 TO # XR5,100,000 AT LEAST.

X: a rarer beast?

However, Light Delivery Chassis Vegetable Truck serial # 2AB51813 has Engine # **X**4,312,121 # 348532 # Block bow-tie 2 D 4 8 dated April 4th 1928, with a # 348540 Head dated H 8 8 with a "1" underneath the first "8", for August 8th 1928. This truck was sold originally in New Jersey and fitted with a body by Boyer Bodies, and was thus an "eXport" specification l.h.d. truck, SUP from Tarrytown Plant, as would have been exported by GM Export Company. This was probably the l.h.d. standard motor equivalent of the U.K. export "XR" motor. Note that as it was a light delivery chassis, the "T" prefixed truck motor was not fitted. This is, so far, the only known "X" prefixed motor, and proves that there were l.h.d. equivalents of the "XR" motor, as had been prophesised but never before proven. Other l.h.d. export motors used in Light Delivery chassis had no prefixes: for example # 4,596,3xx exported via Bloomfield, New Jersey Boxing Plant to General Motors G.m.b.H., Berlin-Karlsrüher,

Germany which has Car Number: XFCA11527 Block # 348532 F-8-8 June 8th 1928 in the Sinsheim Museum.

ENGINES: AS PER ABOVE?

11. The next change was on July 1st, 1928, ready for the August 1st dealers' contracts renewal when the Capitol/Canadian Capitol or Capital Series LP/L.P. [see Ken's comments below, in "REPLACEMENT ENGINES"] was announced as a running change, with a 4-speed gearbox fitted as standard, and the 35 b.h.p. motor, and # 348532 Block, but the motors were prefixed for right-hand drive with "TR" as with the Series LO/L.O. The "XR" prefixed Light Delivery motors, continued as just mentioned. However, the July 14th, 1928 Chevrolet Service Bulletin D-1-51 states that the 1928 LP was the "NATIONAL" model, as per the 1928 AB. It is thought that this indicates the direction that the Parts and Service Department were intending to go, but in the August 1st 1928 edition of the Parts Book, the name "Capitol" was used: the nameplates had presumably already been stamped and the only change was the 4-speed gearbox as standard. The last known LO motor in a Hendon chassis was # TR4,484,533 with components cast the first week in May?, and motor assembled about the 3rd week? and the earliest LP, # TR4,656,478 with components cast around June 21, and assembled early July, perhaps July 2nd? Examples of these change-over period motors:

4,569,052 F-1-28 June 1st 1928 [KEN'S SPARE MOTOR]
4,584,392, BLOCK CAST # 348532 and DATE CODE F-6-8, June 6th, 1928.
4,630,995 BLOCK CAST # 348532 and DATE CODE F-16-28, June 16th, 1928 and HEAD CAST # 348540 DATE CODE F-14-28, June 14th, 1928 in AB Tourer imported into Uruguay
4,636,971, BLOCK CAST # 348532
7 and DATE CODE **"C-26-8"** March 26th 1928 [Brazilian 1928 Roadster]
was this in fact F-26-8, June 26th 1928?
4,650,884, BLOCK CAST # 348532 and DATE F-20-8 for June 20th,1928
4,658,334 BLOCK CAST # 348532 CAST DATE F-22-8 June 22nd, 1928
4,664,036 BLOCK CAST # 348532, CAST DATE June 25th, 1928: 348532
BOW-TIE 17 F- 25- 8
4,664,036 CAST # 348532 F-25-8, CAST DATE June 25th, 1928

L.P. TRUCKS:
SERIAL# ? ENGINE # T4,733,497 348532
BOWTIE 8 G –11- 8 July 11th, 1928
REYNOLDS-ALBERTA MUSEUM L.P. TRUCKS
SERIAL # 303331 ENGINE # 4,790,657 # 348532 G-23-8 July 23rd 1928
SERIAL # 304284 ENGINE # T4,814,548 # 348532 G-31-8 July 31st 1928
GM of Canada Ltd.
Model Capital
SN 30331
Oshawa Ontario
SERIAL # 307630 ENGINE # T4,876,521 HAS "CAPITOL" PLATE
SERIAL # ? ENGINE # T4,896,595 HAS # 348532 HEAD BOW-TIE # 348540 L -1-1 December 1ST 1931 **which proves that there were later castings of 4-cylinder components.**
BLOCK: BOW-TIE 17 3
G-31-8. July 31st 1928
TRANSMISSION # 590328
BOW TIE 1
H-16-8 August 16TH 1928
NZ NATIONAL CAR/LIGHT DELIVERY: MOTOR # R4,837,784 H-2-8 August 2ND 1928
CANADIAN HEAD [2-PORT]: # 348540

BOW-TIE 10 H-2- 8 August 2nd, 1928
Brazilian truck motor # T5,005,584 # 348532 11 I-10-8 September 10th 1928
NZ CAPITOL LP TRUCK MOTOR # TR5,016,562 I-12-8 September 12th 1928
NZ CAPITOL LP TRUCK MOTOR # TR5,032,582 HAS BLOCK CAST DATE I-17-8 HEAD I-19-8 September 17TH/19TH 1928 respectively.

The changeover from LO/L.O. to LP/L.P. motors may have commenced at around # 4,630,000 or 4,641,000: Car AB35484 imported into Uruguay has a Block Cast Date of June 16th 1928, and Engine # 4,630,995. This would have allowed motor assembly to take place in Flint Motor Plant and then railing to assembly plants ready for installing prior to July 1st delivery to dealers. *Ken Kaufmann advises that because of the problems of railing engines to all corners of the U.S. and to Oshawa, that there was no exact change-over point so far as engine numbers were concerned and that there was thus a few days' of interspersing of motors.* It is clear that there was no Service News to confirm any exact change at any specific Engine number. A considerable amount of effort has been made to establish exactly when the changeover took place, but 10,000 units can represent nearly four days' production and taken all evidence in hand it is suggested that there was a period of several days in which motors in their storage racks were used in the last of the LO/L.O. and first LP/L.P. trucks without a definite allocation.

12. The last 4-cylinder motor built was # 5,069,697, with the highest LP motor under this number is # TR5,063,139, about two days production from the last ever. However, LP48228 registered in April 1929 had Engine # [TR]5,071,812, which is after the official "last motor". However, Ken Kaufmann suggests that # 5,069,697 was the last DOMESTIC market 4-cylinder motor and export and service exchange motors were completed afterwards, including for Australia. It is suggested that 4-cylinder castings finished in mid-October, with assembly 2-3 weeks later, and then there was a break for re-tooling for the new 1929 6-cylinder motors, which were cast from around the first week in November onwards. Ken Kaufmann suggests that Saginaw cast a run of service Blocks and Heads right at the end of 4-cylinder production on the basis that it was a lot cheaper to run off several thousand components for stockpile rather than produce new castings at a later date. It is not yet known if any 4-cylinder castings were produced after 1928. It is likely that independent companies produced after-market castings as spare parts.
ENGINES: U.S.: # 3,863,597 to # 5,069,697 except for # 3,864,401 to # 3,864,487. Canadian: # 3,869,846 to # 5,066,271. However, the last motor actually produced might have been at around # 5,072,000.

13. After the last 4-cylinder motor was built, there a was reversal back to "RT" prefixes for the 6-cylinder Truck engine prefixes starting with the International Series LQ, and the use of "R" for rhd International Series AC car and light delivery motors until 1935 when the use of different car and truck motors spawned the reversal back to "TR" prefixes. Again, this identified readily the fact there was a totally different engine, for Parts ordering purposes because TR and RT engine numbers might clash in the future. The "TR" prefix was used up until 1935.

1924 to 1928 REPLACEMENT ENGINES:

Part Numbers for replacement Motor Assemblies were:
Superior Series B and F # 41360
Utility Express Series D and H, # 336739
Superior Series K # 344095
Superior Series V # 345501
Utility Express Series X # 345503

Capitol Series LM # 346853
Capitol Series AA, LO, LP plus on the AA, # 346712 Fan and # 352509 Muffler # 348525
National Series AB passenger cars # 348523
National Series AB ½ Ton # 348661

Ken comments: *"The January 1st 1929 edition of the Parts List covers models up to the series LP: note LP is listed as "Capitol" model on information page and in Parts List, also note only (4) replacement motors are available January 1st, 1929. What I never noticed before is # 348525 that in the February 2nd, 1928 edition was listed only for the LO is then used for the LO, LP and AA passenger cars. Now this is a 1928 truck engine that has the '28 block with cast iron 4.3 to 1 Compression Ratio pistons and 2 port head that was used in the 1927 passenger car! The # 353609 muffler is the 1928 muffler that would have to be used to work with the Two-port exhaust manifold (this is what I had in my '27 coupe except that I had the 28 motor with aluminium pistons with the greater capacity truck 4 bladed Fan). The recommended # 346712 fan is the passenger car 2 blade fan. This shows that replacement engines were not made after model year production ended -they were stockpiled and mostly only the current years were available for older models. I wonder if the T prefix only was stamped on these replacement truck engines that would then be stamped with the original 1927 Engine # when installed in a 27 passenger car? So perhaps it is possible to find a 1927 car with a 1928 motor (2-port Head) with a stamped 1927 serial number with a "T" prefix*."

There were also Hendon-supplied service exchange Blocks as well, usually, it seems with castings produced at Saginaw Plant one year later than the original, which was apparently practice for Chevrolet right up to the War at least. Thus replacement engines would not have had serial numbers, and the owner would have reported the number that looked as though it WAS the new serial number, that is the Casting Number! For example:
X8712 a "LORRY" was registered May 4th, 1926 was noted on the Register with "ENGINE # G 7 7 346709" which was a replacement engine, or a service exchange block, Block cast date of July 7th, 1927 and the 1927 Block Cast Code # 346709 [service exchange engines had to have their new numbers quoted on the Registration Book and also on the Registers].

CYLINDER HEADS:

The Cylinder Head casting on U.S. 490 and Superior models from 1922-24 heads were # 327772. However, 1925 Models started with # 345453. Having said that, early 1922 Canadian 490's used a Block Casting # 45834 and Head Casting # 41522, then reverted to the U.S. style Casting Numbers # 327773 [Blocks] and # 327772 and # 345453 [Heads] respectively. However, as mentioned above, there was also a S.P.C.-cast Head with Casting # 344128 which was also the Part # listed in the January 1st 1926 Parts List for 1922-26 motors *[so must have been a Head used in 1925 at least even though the Parts and Cast # s are the same: Ken Kaufmann]*

The 1926 Series V car/light delivery and the early 1927 Models also used the Head Casting # 345453 which was a SINGLE PORT design with 1½" valves and the manual spark advance distributor that was rated at 30 b.h.p. Example: Canadian Head cast by S.P.C. # 354543, April 7th, 1926. The 1927 and 1928 Models AA and LM used the same Cylinder Block, Casting # 346709 between January and December 1927, as mentioned above. However, a new Casting # 346886 Cylinder Head was introduced 7 June 1927 with Engine # 3409976 except for Motors numbers # 3410801 to # 3415520, and featured bigger 1 21/32" valves as against 1½". Also at about the same time, the Delco-Remy Distributor was upgraded to an automatic advance type and the carburettor was improved from the Carter C-RX-O to the C-RAJX-O, Part # 346896 which matched up the larger cylinder head inlet ports used with the larger valves [the later carburettor will not fit the earlier head],

another reason for distinguishing motors with a "TR" prefix. However, the GM Limited Summer 1927 Brochure dated August 1 1927 states that the "Truck" motors produced "32 b.h.p." with the Carter being the model states that the Truck motors produced 32 b.h.p. with the Carter being the Model RXO !: this carburettor was used until June 1927 as mentioned above which suggests that the advertisers were covering both angles as there were plenty of pre-June 1927 models to be sold as well as new stock . The casting # of the later 1928 Cylinder Head from 1 January 1928 was # 348540 and the Cylinder Block # 348532. This new Head featured larger valves, increased valve lift and a 2-piece exhaust manifold, with 2 matching exhaust ports together with Compression Ratio from 4.3:1 of 4.5:1 as well. The 1928 LO therefore had a 35 b.h.p. engine, but still with a three-speed gearbox as standard. The LP then featured the same engine but with a four-speed gearbox as standard. However, at least the 1927 LM was available with a four-speed gearbox as an option, probably fully-imported chassis prefixed "T" with Oshawa serial numbers "cut down" by the deletion of a "0" to fit the build plate.
The January 2nd 1947 4-cylinder Parts List indicates that by then the only Heads that they had for 1928 Models were the # 245453 and # 346886. These would have been procured by the Parts Department.

Examples of Canadian '28 2-port Heads are:
348540 H 2 8 # 348540 E 10 8 for August 2nd, 1928 and May 10th, 1928 respectively.
BOWTIE 10 BOWTIE 7

To summarise the known casting numbers for Cylinder Heads are:
 # 327773 AUGUST 1921 TO NOVEMBER 1924 [U.S.]
 # 41522 1921 TO 1922 [Canadian] then # 327773
 # 344128 DECEMBER 1924 TO MARCH 1926
 # 345453 MARCH 1926 TO JUNE 1927
 # 346886 JUNE 7TH TO NOVEMBER 1927
 # 348540 DECEMBER 1927 TO OCTOBER 1928 AND THEN FOR FURTHER CASTINGS IN LATER YEARS:
 # 348540 [e.g. 1931 cast for the Parts Departme nt].

1927-1928 PISTONS:

Ken Kaufmann has ascertained the piston situation for 1927-28. There were 5 pistons:
1. Cast Iron, 4.3 to 1, AA, LM, AB ½ Ton, LO, LP
2. Cast Iron, 4.75 to 1, for Service only for use with Ethyl Gas
3. Aluminum, 4.5 to 1, AB passenger cars only and service replacement
4. Aluminum, 4.8 to 1, Service replacement for AA/AB passenger car use for Ethyl Gas
5. Aluminum, 5.2 to 1, " " " " " " " " " "

I do not think commercial vehicles ever had the higher C.R. or aluminium pistons that were suited only for the lighter duty pass service. I doubt High comp. pistons were available for export since you probably didn't have Ethyl gas available yet.

FERRO MACHINE AND FOUNDRY COMPANY, CLEVELAND, OHIO

Ferro supplied raw castings to Chevrolet, from 1925 to 1927 for Blocks but not Heads. By 1928 after the S.P.C. Plant was taken over by Chevrolet to form the Chevrolet Gray Iron Foundry, Chevrolet had enough castings to avoid using an outside supplier.

However, adding all the numbers for U.S. and Canadian production proves that only Flint assembled engines for Canada and U.S. vehicles, and that there was no other supplier. So after the "SM" motor assembler in 1924, GM of Canada imported Flint-built units until Walkerville started again in 1928? These 1925-on engines were supplied naked to Canadian Products Limited/Canadian Products Division of General Motors Products of Canada Limited, in Walker Road, Walkerville, with ancillaries added, and were then railed on to Oshawa for assembly.

EXAMPLES OF RIGHT HAND DRIVE ENGINES 1924 TO 1925

1924 SUPERIOR SERIES F

SERIALS STARTED WITH 1214410?

R1220135	**CAST DATE OCTOBER 11 1923**
R1246717	**CAST DATE OCTOBER 23 1923**
R1353336	**CAST DATE DECEMBER 13 1923**
R1353347	**CAST DATE JANUARY 15 1924**
R1366180	**CAST DATE FEBRUARY 20 1924**
R1420256	**CAST DATE MARCH 25 1924**
R1528991	**CAST DATE DECEMBER 17 1923**
R1537322	**CAST DATE OCTOBER 9 1924**
R1537283	**CAST DATE JANUARY 29 1924**

1925 SUPERIOR SERIES K

HOLDEN STATED THAT AUSTRALIAN MOTORS RAN:
R1559195 to # **R**1792526 and then # **R**1769645 to # **R**2840983

2K	5079	**R**1563192	2/25	
K2	5105	**R**1562898	2/25	
2K	7924	**R**1580883	2/25	
2K	8015	**R**1562872	2/25	
2K	8061	**R**1585147	2/25	
2K	9990	**R**1582500	2/25	
2K	20226	**R**1664132	4/25	
2K	21144	**R**1670774	4/25	
2K	24700	**R**1675826	4/25	21.7HP

1925 SUPERIOR K

XA2K28	**R**1613875	4/25
2K220	**R**1629823	4/25
XA2K238	**RT**1630842	4/25

1925 SUPERIOR K

2K	70881	**R**2039809	9/25

1925 SUPERIOR K

2K	80002	**R**1638334	4/25	
2K	80049	**R**1629773	4/25	
2K	80065	**R**1570642	2/25	
2K	80086	**RT**1629616	4/25	
2K	80157	**RT**1664849	4/25	
2K	80173	**RT**1664844	4/25	
		R1747425		**AUSTRALIA**
2K	80309	**R**1742896	6/25	
2K	80334	**R**1690681	5/25	
2K	80513	**R**1742856	6/25	
2K	80541	**R**1742856	6/25	
2K	80603	**R**1703149	5/25	
2K	80604	**R**1703277	5/25	
2K	80867	**R**1739208	6/25	
2K	80879	**R**1706866	5/25	
2K	80943	**R**1892864	9/25	
2K	80948	**R**1691470	4/25	

1925 UTILITY EXPRESS S -BLOOMFIELD 'CKD' START 5/25 – EDGWARE ROAD, HENDON 5/25

RT1578575	2/25	**EARLIEST KNOWN "RT" PREFIX**

S 5173T **R**1648499 4/25
S 5213 **RT**1584704 2/25