# 5700-5704

## K-5-a

Late in 1929, in light of increasing competition from rival Canadian Pacific in the Montreal-Toronto service, Canadian National Railways ordered three Hudson type locomotives, specifically designed for fast passenger running, from Montreal Locomotive Works. By mid-1930, the order had been increased to five, and in September of that year CN's first 4-6-4, No. 5700, was delivered.

No. 5700 looked swift, even at rest. Her lacy 80" spoked drivers were the largest ever cast in Canada up to that time. Piping on the boiler and firebox was concealed beneath a jacket of polished steel, and the whistle perched jauntily beside a short, squat stack. Air pumps and turbo-generator were concealed behind shields on the pilot, while the traditional sand dome was dispensed with in favour of a sand box concealed within the smokebox. Even the air reservoirs were hidden from view, as integral parts of the Commonwealth one-piece engine bed casting.

The first three K-5's were built with outside journal bearing engine trucks, while Nos. 5703 and 5704 were equipped with inside-frame roller bearing trucks. All five locomotives boasted trailing truck boosters, Elesco exhaust steam injectors and Baker valve gear.

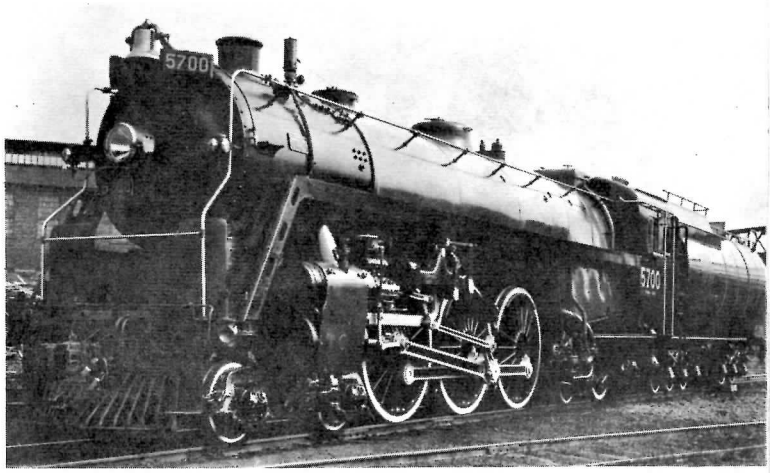
Tenders of the K-5's -- with 14,000 Imperial gallons water capacity, the largest ever on the CN system -- pioneered CN's truck-mounted unit brake cylinder arrangement, which provided for four separate cylinders, one to each side frame actuating the clasp brakes on one side of the truck only. The unit arrangement replaced the conventional tender frame mounting for the brake cylinder, which occasionally had a tendency to pull a truck off centre. The stoker engine and a track sprinkler were fitted to the K-5's tenders.

For better than ten years, first in competition with CP and then, under the pool agreement, in cooperation with the paralleling road, the 5700's were the mainstay of the fast Toronto-Montreal trains; by 1941, each engine had rolled up over a million miles, completing about 150 round trips annually. During the War, the trains they most frequently hauled, Nos. 6/15 and 14/5, became too heavy for their capabilities, and 4-8-4's gradually took over. From 1942 on, the 5700's were a common sight on fast southern Ontario passenger trains, although one would occasionally be called upon to take a section of one of the Montreal flyers. These engines saw comparatively little freight duty, and remained in passenger service continually until their withdrawal in 1959.

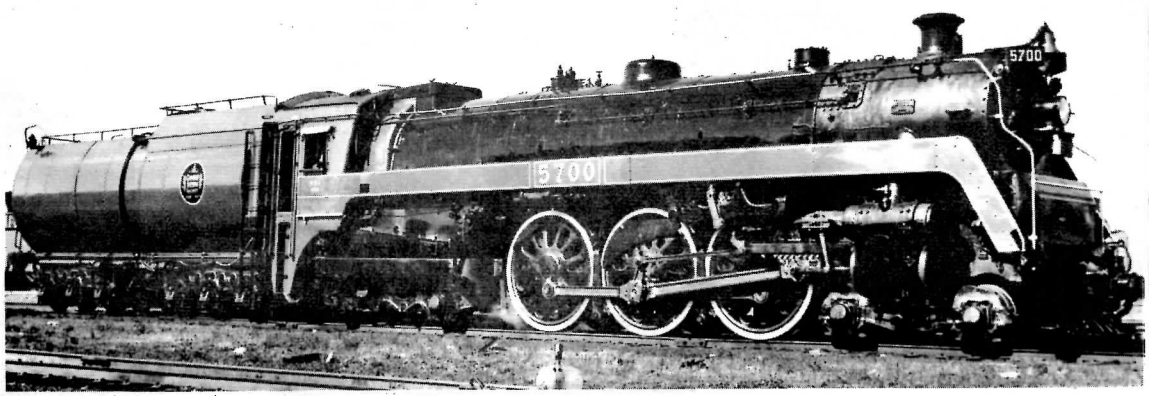
Although the 5700's were less than ideal for handling heavy trains, they performed admirably with their design load of eight or nine passenger cars, 70 m.p.h. speeds at half-throttle being commonplace. There were occasional unofficial clockings of K-5's running in the neighbourhood of 120 m.p.h. on the Montreal-Toronto route! The 5700's are said to have handled well, and gave an unusually smooth ride. This was not gained without expense, however, since backshop men recall that the K-5's were difficult to work on, particularly in matters concerning the trailing truck and booster.

Throughout their careers, CN's 4-6-4's underwent changes that both subtly and radically altered their appearance. In 1931, they were fitted with small wind scoops at the stack, which gave way to full-fledged smoke deflectors in 1943. At the same time as the deflectors were applied, the protective cowl at the pilot beam was closed in, the running board skirts deepened and the numbers, in cast bronze, relocated to the skirt. As well, the tender, cab and running board skirt of each locomotive was painted green. The smoke deflectors were removed in 1950 and cap stacks, in the style of the 6060-series 4-8-2's, were applied. In 1939, engine 5700 was fitted with Boxpok drivers, a modification which was confined to the one locomotive. An experimental application of a circular clear-vision windscreen (which rotated at high speed to give a clear forward view under the most adverse conditions) to the engineer's side of at least one of the K-5's was abandoned about 1950.

During the last decade of operation, engine 5704 lost its cap stack for a time in favour of a straight stack as was originally applied. Also during this period, Nos. 5702 and 5704 evidently exchanged their engine trucks, since the preserved 5702 bears an inside-frame truck while 5704 carried an outside-frame truck to the scrappers.




UPPER RIGHT: Gleaming in black Duco enamel and polished steel, 5700 looks every inch a thoroughbred as she poses for a builder's portrait in September, 1930.
/CNR




RIGHT: In a latter-day pose, fresh from Stratford Shops, 5700 typifies the appearance of the K-5's during their last decade of operation. Note the Boxpok drivers, unique to this engine.
/R. George Coll'n

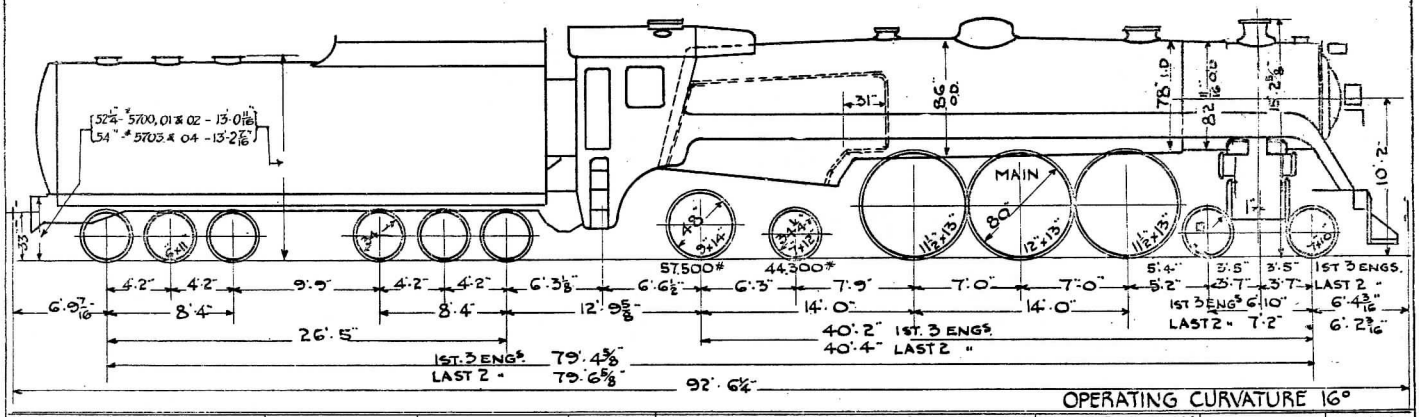
| SUB-CLASS | DATE BUILT | BUILDER | BUILDER'S ORDER No. | BUILDER'S BOILER Nos | | PRESENT ROAD Nos |
|---|---|---|---|---|---|---|
| K-5-a | 1930 | M.L.W | Q-370 | 68,394 to 68,396 | | 5700 to 5704 |
| | | | | 68,540 & 68,541 | | |

CANADIAN NATIONAL RYS
MECHANICAL DEPARTMENT
MONTREAL
TYPE HUDSON CLASS K-5

* WITHOUT BOOSTER
WITH BOOSTER = 53,300 LBS

COMMONWEALTH ENG. BED

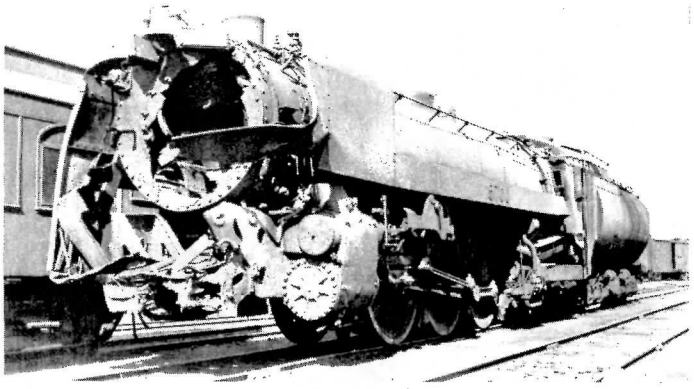
* ENG. TR. WHEELS
= 5700, 5701, 5702 = 34½ STEEL TIRED.
= 5703, 5704 = 33" ROLLED STEEL.




| SUB-CLASS | CYLINDER DIA. | CYLINDER STROKE | DRIVING WHEELS O.S. DIA | DRIVING WHEELS DIA. CTR. | FIREBOX LENGTH | FIREBOX WIDTH | GRATE AREA SQ. FT. | TUBES LARGE | TUBES DIA. | TUBES SMALL | TUBES DIA. | TUBES LENGTH | TENDER CAPACITY WATER | TENDER CAPACITY COAL | SUPERHEATER | HAULAGE RATING. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K. 5. a | 23" | 28" | 80" | 73" | 126⅛" | 84 3/16" | 73.6" | 146 | 3½" | 44 | 2¼" | 19'-1" | 14,000 GLS | 18 TONS | SCHMIDT "E" | 43% B |

| SUB-CLASS | HEATING SURFACE □ FT TUBES | FIREBOX | TOTAL | SUPER-HEATER | WEIGHTS IN WORKING ORDER. LBS ENG. TR. | DRIVING | TRAILING | TOTAL ENG | TENDER | ENG & TEN | LIGHT WEIGHTS DRIVERS | TOTAL ENG | FACTOR OF ADHESION | MAXIMUM TRACTIVE EFFORT | BOILER PRESS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K. 5. a | 3032 | 345 | 3377 | 1465 | 66,000 | 188,600 | 101,800 | 356,400 | 303,500 | 659,900 | 169,700 | 319,900 | 4.36 | 43,280 # | 275 # □" |

| SUB-CLASS | | MECHANICAL LUBRICATOR | STOKER | TYPE OF REVERSE GR | TYPE OF VALVE GR | SYPHONS | MULT. THROT. | EX. STM. INJ. | STEAM HEAT | No. & SIZE OF AIR PUMPS | BRICK ARCH | EXTREME WIDTH. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| K.5.a | | SEE SPEC. LIST | SEE SPEC LIST | SEE SPEC. LIST | BAKER | SEE SPEC LIST | YES | SEE SPEC. LIST | YES | 1-8½" CC | YES | 10'-11⅝" |

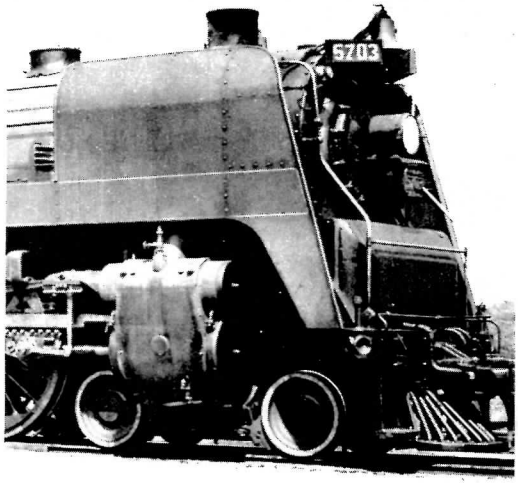


Two of the five K-5 class locomotives have escaped the torch, as follows:

5702 - Preserved by the Canadian Railway Museum, (CRHA) Delson, Quebec.
5703 - (Renumbered to 5700) Held in CN's historical collection. ●

Upper Canada Railway Society
BOX 122 TERMINAL "A" TORONTO
**LOCOMOTIVE DATA SHEET**

11-66




UPPER LEFT: The 5700's were not without their share of mishaps. This was the result when 5700 ran head-on into 2-8-0 No. 2392 at West Toronto, on September 10th, 1946. Just eleven months later, sister 5702 tipped over while rounding the curve at Kingston station, and skidded to a halt outside the operator's bay window, lying on her left side and filling the station with smoke. /F. Sankoff

RIGHT: The Hudsons' first experimental smoke lifter took the form of an air scoop, as shown here on 5703, in 1931. /CNR

LEFT: The full face-lifting of the early '40's produced the enclosed cowling and smoke deflectors shown here. (Compare 5703's engine truck with that of 5700, shown on the reverse side of this sheet.
/R. George Coll'n