Canadian National Railways 1928 4-6-4 HuDSON LOCOMOTIVES

Canadian Railway and Marine World

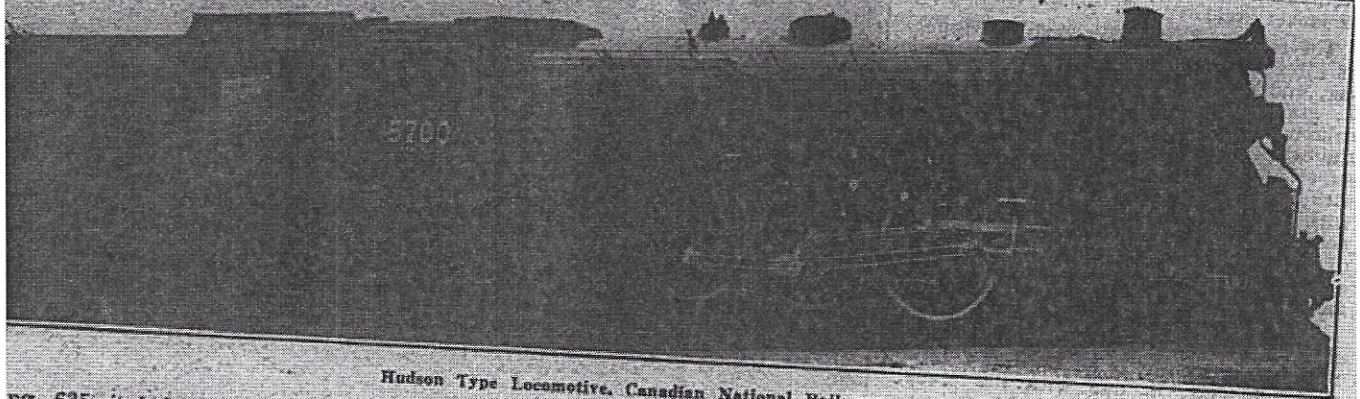
December, 1930.

Hudson (4-6-4) Type Locomotives, Canadian National Railways.

A preliminary description of five Hud- type locomotives delivered recently Canadian National Rys., by Montreal omotive Works, was given in Can- n Railway and Marine World for Oc- pg. 635, it being stated that the had first ordered three locomo- f this type, as mentioned in our issue, pg. 17, and had subse- ordered two more, as mentioned July issue, pg. 438. It was stat- last two ordered were to be he first three, with the ex- on the last two the engine trucks would be equipped bearings. That statement lly correct; while only the omotives ordered have en- equipped with roller bear- der trucks of all five loco- ders being of Timken manufacture, and those in the trucks of the other two being of SKF type. The weights, leading dimensions, etc., of the locomotives are as follows:—

Service	Passenger
Type of cab	Vestibule
Limiting height	15 ft. 3½ in.
" width	11 ft.
Wheelbase, driving	14 ft.
" loco.	40 ft. 4 in.
" loco. and tender	79 ft. 6 5/8 in.
Diam. of driving wheels	80 in.
Boiler, type	Straight top, radial stayed.
" inside diam., 1st course	78 in.
" outside " largest course	86 in.
" working pressure	275 lb.
Firebox length and width	126 1/8 x 84¼ in.
Tubes, no. and diam.	44-2¼ in.
Flues, no. and diam.	146-3½ in.
Length of tubes	19 ft. 1 in.
Combustion chamber, length	31 in.
Weight in working order on engine truck	66,000 lb.
" " " " on trailing	101,800 lb.
Length over all, loco. & tender	92 ft. 6¼ in.
Heating surface, tubes and flues	3,032 sq. ft.
" " firebox, arch tubes and syphons	345 sq. ft.
" " total	3,377 sq. ft.
Grate area	73.6 sq. ft.
Cylinders, diam. and stroke	23 x 28 in.
Maximum tractive effort without booster	43,300 lb.
" " " with "	53,000 lb.
Factor of adhesion	4.35
Maximum curve loco. will take	18°

These locomotives are designed for high speed passenger service, and are intended for use on extended runs over two or more divisions. They are equipped with Franklin boosters which, as shown by the figures given above, provide an additional 10,000 lb. of tractive power at starting and at slow speeds. In the boiler construction, in order to



Hudson Type Locomotive, Canadian National Railways.

Track sprinkler under tender, Hudson locomotives, Canadian National Railways.

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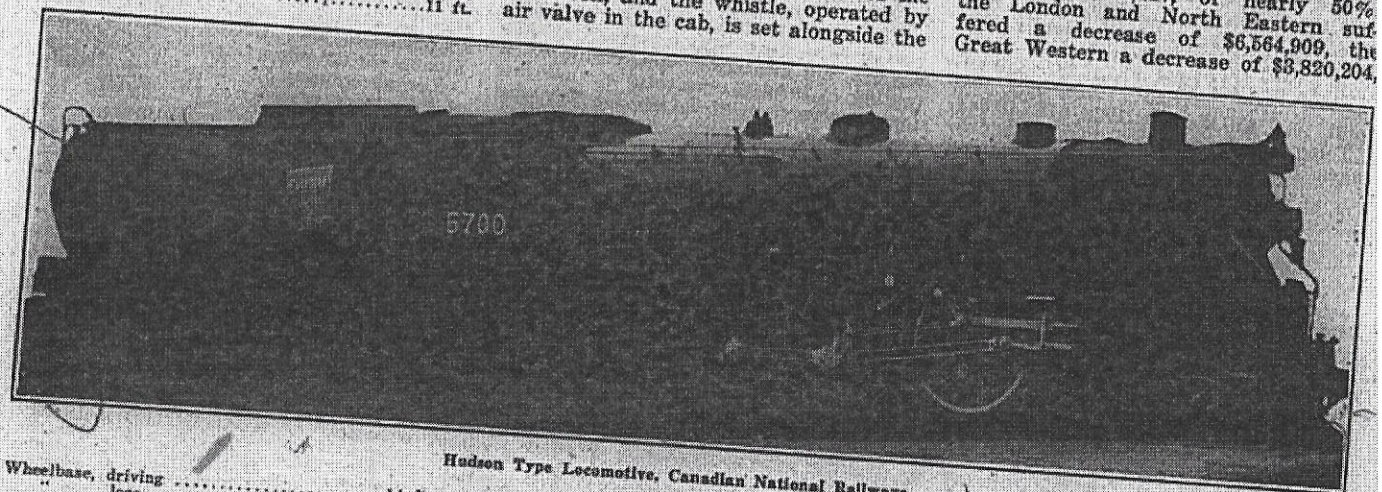
The ordering of three Hudson type locomotives by Canadian National Rys. from Montreal Locomotive Works was mentioned in Canadian Railway and Marine World for January, pg. 17; the chief dimensions and leading characteristics of the three units were given in our April issue, pg. 218. In our July issue, pg. 438, it was stated that the C.N.R. had ordered two more Hudson type locomotives from the same builders, and in our August issue, pg. 513, it was explained that the last two ordered would be similar to the first three, with the exception that on the last two ordered the engine and tender trucks would be equipped with roller bearings. The first of the five locomotives to be completed was turned out about the middle of September and is, at the time of writing, being broken in in freight service. An illustration of it is given herewith. The numbering is in the 5700 series. Specifications are as follows:—

Service	Passenger
Type of cab	Vestibule
Limiting height	15 ft. 1 in.
" width	11 ft.
Wheelbase, driving	14 ft.
" loco.	40 ft. 2 in.
" " and tender	79 ft. 4½ in.
Diam. of driving wheels	80 in.
Material of driving wheel centers	Nickel [illegible]
Leading truck wheel[illegible]	

type HNL injector; Elesco exhaust steam injector; Nicholson thermic syphons; Pyle National headlight equipment; Commonwealth leading and trailing trucks; World Consolidated safety valves; Westinghouse ET-6 air brakes; Franklin fire door; cast iron driving box wedges; cast steel driving boxes; Detroit hydrostatic and mechanical lubricators; King sanders; Leslie AK steam heat reducing valve; King metallic packing; Franklin radial buffer; Vapor flexible Phillips steam heat connectors; Transportation Devices Corp. air bell ringer; and Bird-Archer blow-off cocks.

The tenders have Commonwealth cast steel frames and Vanderbilt style tank; the tender trucks are of the Commonwealth 6-wheel type with semi-steel tired wheels 34¼ in. diam., and with journals 6 x 11 in. Coal capacity is 20 tons and water capacity 14,000 imp. gallons.

The locomotive illustrated herewith presents several contrasts with usual types. The bell is hung in front of the smokebox, and the whistle, operated by air valve in the cab, is set alongside the stack, the idea in having these two warning signals at the front being to better enable th[illegible]



Hudson Type Locomotive, Canadian National Railways.

4-wheel trailing truck. The possibi[illegible] offered in the way of enlarged [illegible] area, boiler capacity and steam g[illegible] ating ability, with consequently inc[illegible] ed fuel economy on the one hand, o[illegible] creased train speeds and greater t[illegible] tive effort at high speeds on the ot[illegible] and all-around superior performance demonstrated by the drawbar-horsep[illegible] er curve, were explained fully in [illegible] article in our March issue.

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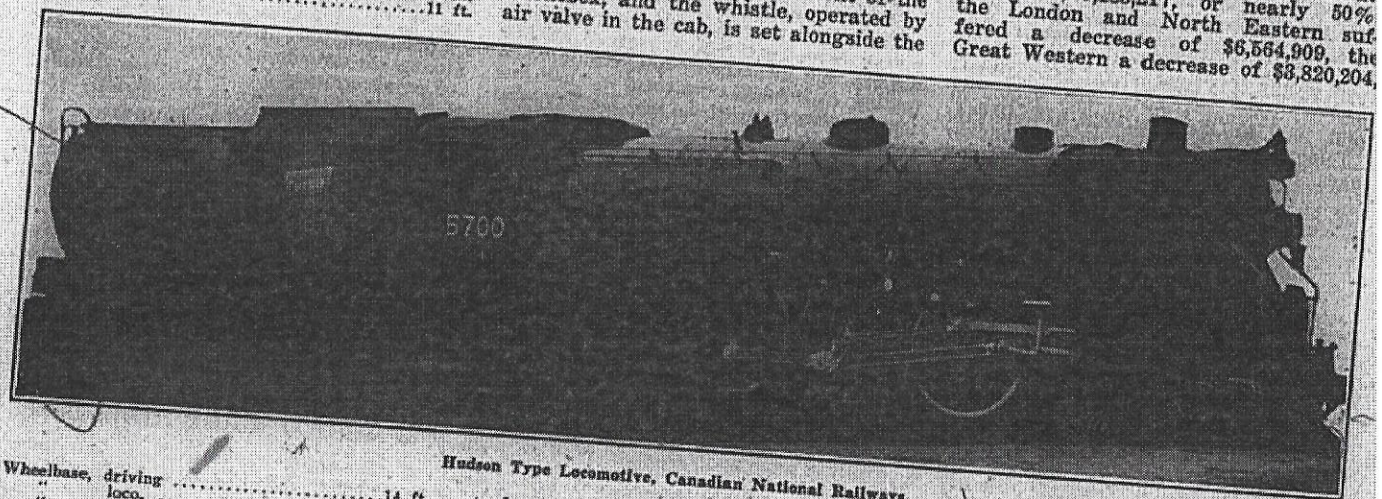

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