2910-2929

by F. H. Howard

The Canadian Pacific is typical of those railroads which carry on an extensive passenger business over a widespread but thinly-populated area, which traffic is transported in many relatively short trains. In the years following the onset of the depression, and until World War II, the term "relatively short" to the C.P.R. implied four or five cars, usually of wooden construction and constituting a trailing load of perhaps 300 tons. Such trains were headed by a variety of motive power, either ten-wheelers like D-6's, D-10's and E-5's or light Pacifics of the G-1 and G-2 classes, few of them younger than 25 years, and all of doubtful economy of operation and maintenance.

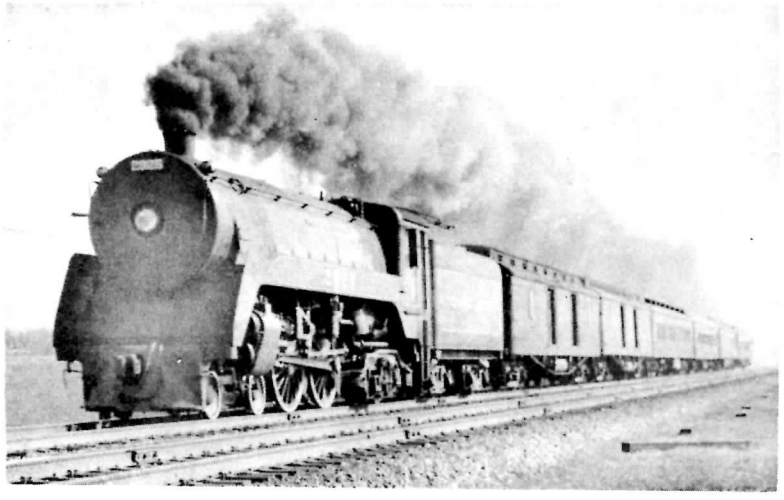
Photos by Fred Sankoff, 25 Botfield Ave., Toronto 18
JUBILEE TYPE 2925 AT WESTMOUNT, QUEBEC, APRIL 23, 1938

By 1937 the decision had been made to infuse the locomotive roster with some modern branch line or secondary passenger power. C.P.R. mechanical officers - carrying on a tradition of bold pioneering in such matters - had been pondering this problem for some time, and settled on a smaller version of the "Jubilee" type 4-4-4 engines built the previous year. Canadian Locomotive Co. Ltd. of Kingston was accordingly given a contract for 20 F-1 class locomotives, the first engines to be deliberately designed for limited tonnage in an era of bigger and still bigger motive power. In August of 1937, the author assisted in the laying down of number 2910 to inaugurate the series; it would have been numbered 2900 according to C.P.R. custom, if it had not been for a pair of old light Mountain-types bearing the numbers 2900 and 2901.

The F-1 was similar to its predecessors in having the same wheel arrangement and very high pressure (300 psi) boiler, small cylinders, front-end throttle, type E superheater, and no steam dome. However, it differed in other respects in view of its strictly local-train function. Its grate area being under 50 sq. ft., no stoker was applied, nor was power reverse gear fitted. A conventional slab-type frame was considered adequate, and the unconventional little feed water pump instead of a big compound one. That great boon to maintenance, the roller bearing, was applied to the engine truck, as was the case on every passenger locomotive built since 1928. A rather larger tender than the shrouded affair behind the first "Jubilee" was provided, and since the wheel-base was considerably shorter, the main rod drove on the trailing driver, the latter being a more conservative 75" in diameter.

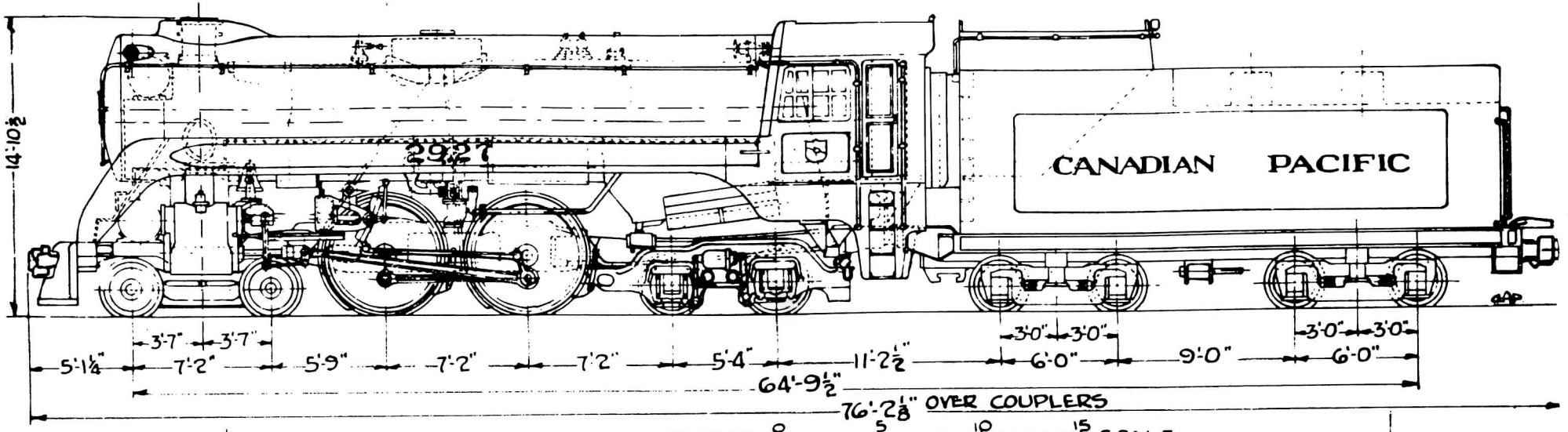
These engines, along with the Royal Hudsons built concurrently at Montreal, initiated the semi-streamlined fashion which was carried on for some years. They weigh 120 tons in working order, 56 tons of it resting on the drivers; this last figure is the third lowest of any class in the C.P.R. fleet, and is indicative of a most courageous venture into tailoring a locomotive to fit a particular job. Although their axle loading is relatively high, their low adhesive weight allows their use on almost any branch line. Their tractive effort is naturally low at 25,900 lb., and they develop 1262 drawbar horsepower at 40 m.p.h.

The F-1's occasionally are used in freight service, but usually on passenger trains. Fifteen of them are on the Western Region, mostly at Winnipeg and Moose Jaw, with the remainder at Toronto, Ottawa and McAdam. No. 2927 at Ottawa has been known to doublehead train no. 8 into Montreal in the days before no. 10 was added to relieve the load, and in summertime used to depart backwards at 4 a.m., with deadhead equipment, to Alcove on the Maniwaki branch, whence a daily except Sundays commuter train brought civil servants into the capital.



TRAIN 731 HEADED BY AN F-1-a AT BRONTE, ONT., MAY 1, 1948

By the spring of 1938, then, the C.P.R. owned all 25 locomotives of the "Jubilee" type, just about all the tendered 4-4-4's the world had ever seen or ever would see. The increase in passenger traffic occasioned by the war demanded locomotives of higher tractive effort, so the F-1's were not repeated, but the theory behind their design persisted right until the end of the steam period; and the Canadian Pacific can with credit point to them as evidence of their recognition that branchline power need not and indeed should not always be cast offs from the main line. In this it was virtually alone, among the railways of North America.



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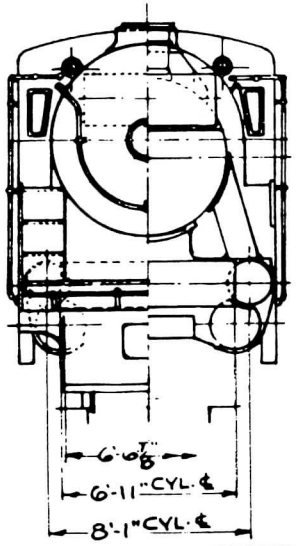
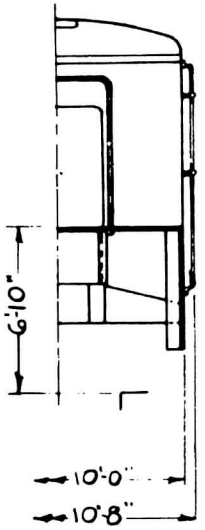




CANADIAN PACIFIC

CLASS - F 1-A

BOILER PRESSURE - 300 #/□"

CYLINDERS - 16½"×28"

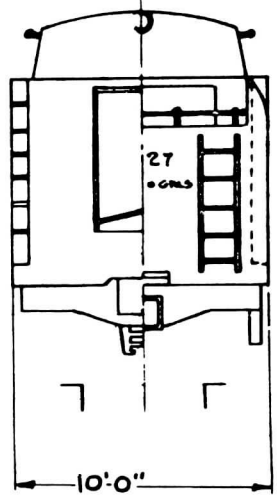
DRIVERS - 75" DIA.

LEADING TRUCK - 33" DIA.

LEADING TRAILER - 36" DIA.

TRAILING TRAILER - 45" DIA.

TENDER TRUCK - 36" DIA.



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