

MECHANICAL HIGHLIGHTS OF THE CANADIAN NATIONAL's 6060's

Early in October 1944, Canadian National received from Montreal Locomotive Works the first of 20 railway designed semi-streamlined Mountain 4-8-2 type (Class U-1-f) steam locomotives built for fast passenger service. Delivered at the rate of about two per week, the full order was completed by December of that year. All but three of the locomotives were scrapped of which No. 6060, on display at Jasper, Alta., since 1962, is being placed in service again.

These engines had a number of interesting mechanical features which gave them a distinctive appearance. Among them - a front end designed to include a conical nose containing headlight and number lamps. A radiator, encased behind a neat grillage, equipped with shutters, was installed to cool the air employed in the air brake system. Also, the smoke stack was given a flared top after the style of those used on locomotives in the British Isles. The bell was moved forward and located at the extreme front end. A deep skirt plate on the running boards swept from the steps at the front all the way back to the cab, presenting an unbroken line from front to rear. All the locomotives were finished in Canadian National green and black, with gold striping, aluminum painted handrails and brass number plates. The locomotives had General Steel Castings Corp. locomotive beds, with cylinders and cradles cast integral. The driving wheels were of Boxpok cast steel type. Walschaerts valve gear were supplied and the locomotives were equipped with exhaust steam injectors and Franklin power reverse gear. Air compressor was of Westinghouse 8½ in. cross-compound type. A Wakefield mechanical lubricator was also installed. All of these special units of equipment were mounted on substantial brackets and attached to the locomotive bed casting.

The inside diameter of the boiler at the first course was 78 in. and the outside diameter at the largest course 86 in. The firebox was 120-1/8 in. x 84 1/4 in. There were 123 - 4 in. flues and 35 - 2 1/4 in. tubes. The distance over the tube sheets was 21 ft. 6 in. The length of the combustion chamber from the firebox ring was 49 in.

The length of the locomotive and tender overall was 93 ft. and the total weight of the locomotive and tender in working order 637,540 lbs. The cylinders were 24 in. in diameter, with 30 in. stroke; boiler pressure was 260 lbs., grate area 70.2 sq. ft. The driving wheels were 73 in. in diameter. Maximum tractive effort 52,500 lbs., factor of adhesion - 4.51.

The U-1-f's driving wheelbase was 19 ft., the locomotive wheelbase 42 ft. 4 in., and the wheelbase of locomotive and tender 80 ft. 10-3/4 in. Weight in working order on the leading truck was 57,750 lbs., on the drivers 236,950 lbs. and on the trailing truck, 61,000 lbs.

Heating surface of the tubes and flues was 3,212 sq. ft. and of the firebox, including the syphon and arch tubes, 386 sq. ft. The extreme height of the 6060 was 15 ft. 4 in. and width of 11 ft. These locomotives were built to negotiate curves up to 18 degrees. Tenders were of the "Vanderbilt" type with six-wheel trucks. They had a capacity of 11,700 gallons of water and 18 tons of coal. The tender weight in working order was 281,840 lbs. Ten locomotives of this class were converted to oil for use in western Canada during the mid-1950's. Tenders were altered to take 5,000 gallons of oil and 11,000 gallons of water.

No. 6060 was replaced during mid-1972 at Jasper by an earlier Mountain type locomotive, No. 6015, Canadian Locomotive Company - 1923, on loan since 1960

from CN to the Canadian Railroad Historical Association's Canadian Railway Museum at Delson, Que. The following log shows the dates the engines were moved to their destinations and changed off.

No. 6015

Date left Museum: April 28th
To Pt. St. Charles Shops, Montreal, for repainting: May 1st
Out of the Shops: July 14th
Departed Montreal for Jasper: July 17th
Arrived Jasper and placed on site: July 27th

No. 6060

Removed from Jasper display area: July 27th
Left Jasper for Montreal: July 29th
Arrived at Montreal and placed in Shop for rebuild: August 3rd

1 June, 1973