

CANADIAN
PACIFIC
EXPRESS
TRUCKS.

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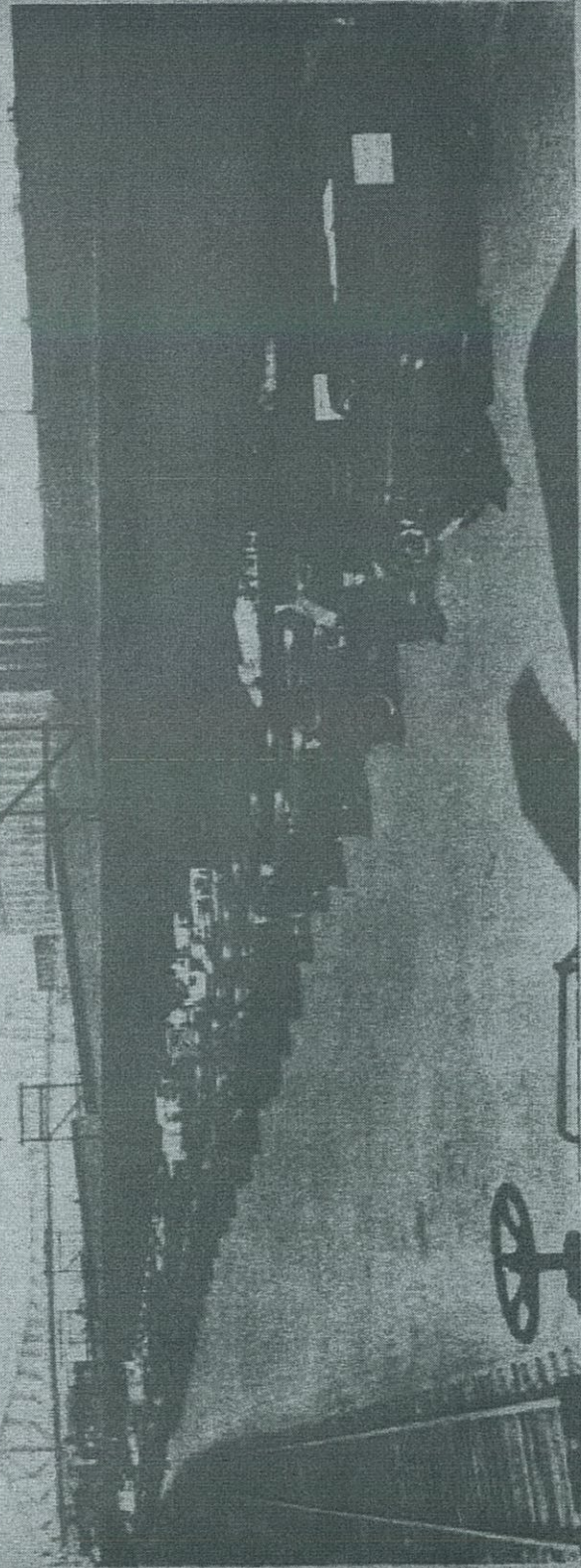
One of the Trucks Operating in Greater Montreal, Heavily Loaded with L.C.L. Freight.

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The Ninety-two New Trucks which are Employed by Canadian Pacific Express Co. Cartage Department in Providing the C.P.R. Pick-up and Delivery L.C.L. Freight Service in Greater Montreal.

1935	5,737,930	30,775,082	1,446,728.68	1,310,403.05	127,122.89	91.21	179,504.37	52,381.69	10,119.14
1936	5,926,951	22,135,360	1,504,534.64	1,254,124.52	220,409.12	85.35	158,129.21	32,279.91	

†Aug. 6 to Dec. 31. *Deficit.

"The autobus depreciation reserve, on December 31st, 1936, stood at \$709,810.72."



Canadian Pacific Express Co. New Trucks at Ottawa.

These Canadian Pacific Express Co. Cartage Department trucks were placed in service at Ottawa on March 1, and they perform the freight, pick-up and delivery service for the Canadian Pacific Ry. Similar service was begun March 1 at Sherbrooke, Que., and will be begun at Montreal May 1.

the Public Service officials adopted a Diesel-electric drive developed by General Electric Company. In this design the engine is located at the rear of the bus body and above the rear axle. The Diesel is direct connected to the generator and all the infinite speed variations of the bus wheels are accomplished through electrical control. It is possible to obtain a high torque at the wheels at a low speed, as well as a low torque at high speeds.

"By direct coupling of the engine and generator, the torque reaction of the engine is counteracted and cancelled out by the opposite torque reaction of the generator. There is, then, an absence of vibration in the engine at idling speeds.

Mack Short Wheelbase, Traffic Type Trucks in Canadian Pacific Express Service

The accompanying illustration is of one of a number of trucks, with Mack Jr. model 21MT truck type chasses and bodies built locally, which were placed in Canadian Pacific Express Co. service in the Toronto area, recently. With wheelbase of 147 in., these models have short length over all, making for maximum ease of handling and thus making the vehicles particularly suitable for hauling in dense city traffic, and where restricted space for loading and unloading is the rule. With 65% in. track, front and rear, the tires are 6.00-20 all around, dual at rear. The engine is a

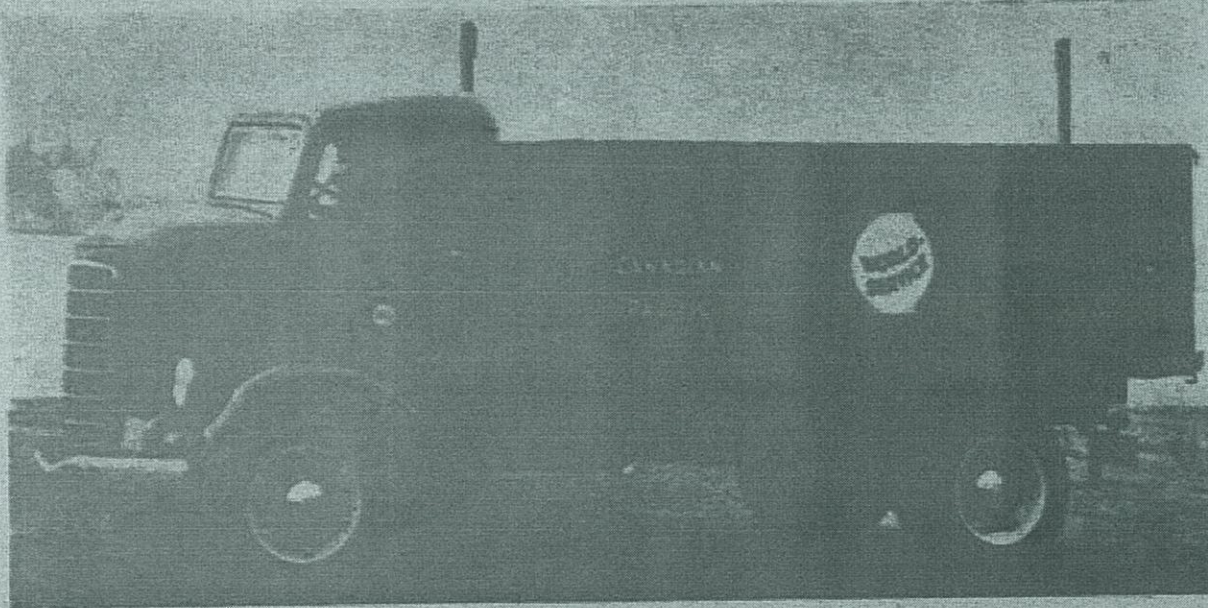
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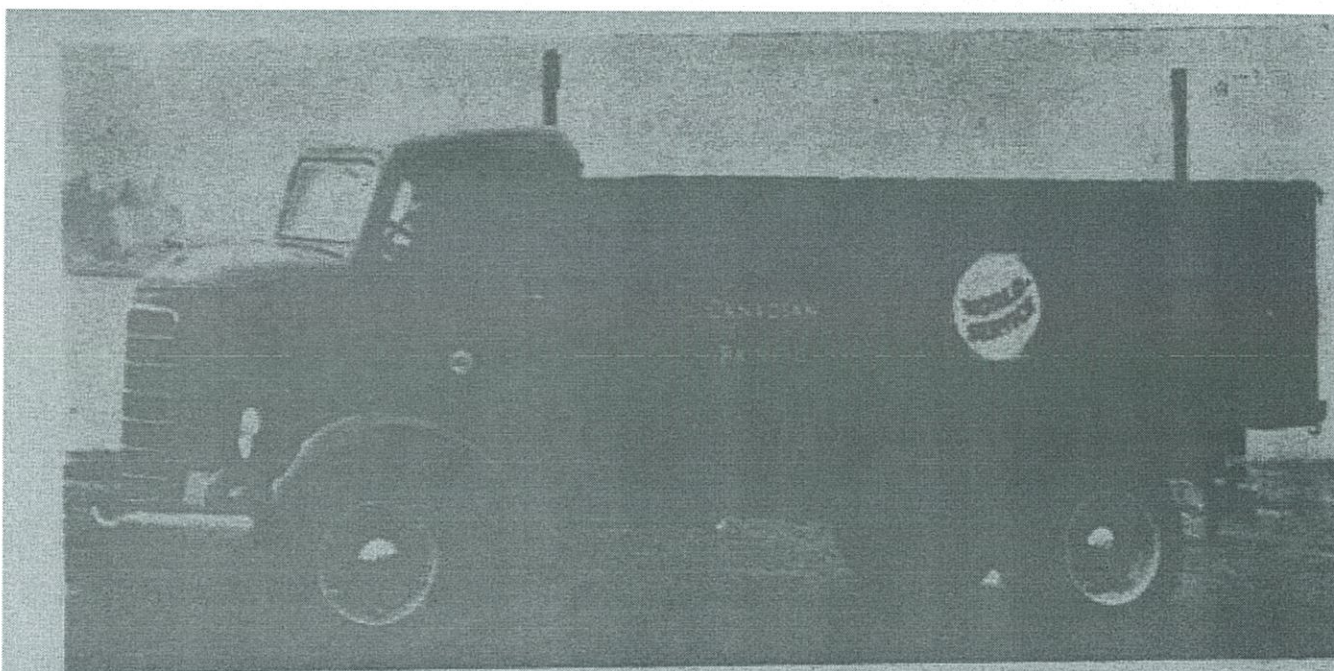
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A Recent Addition to Canadian Pacific Express Co. Motor Vehicle Fleet.

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"When the 27 buses were converted to diesel drive there was considerable comment in various quarters that the Diesel was not suitable for short-haul, many-stop routes. It was claimed that the fuel savings would be negligible and the operation objectionable to the passengers.

"To the contrary, it was found that a Diesel bus covered a given route in better time; was able to accelerate from stop much faster than a gasoline engine, due to the electric drive; that there was an absence of exhaust gas fumes.

"The bus driver finds that the Diesel bus handles easier and he experiences less fatigue. No driver has a definite bus to handle; each bus is operated by the men on the four shifts per day.

"The same men who service the gasoline-engined buses have proved to be fully competent to make all necessary adjustments on the Diesels. It has been found that the amount of maintenance required for the Diesels is no greater than the records for gas units. As much as 40,000 miles have been covered by a Diesel bus without engine overhaul.

"In spite of opinions of some whose Diesel experience had been limited, the engines have handled No. 2 household fuel oil with entire satisfaction, and complete combustion exists even at idling speeds.

"The entire problem of insuring satisfactory lubrication was placed in the hands of the Tide Water Associated Oil Co., who specified the oil best fitted for these Diesels. No sludging trouble has occurred, the bearings have held up and wear has been insignificant."

6-cylinder one, with cylinders 3 in. bore by 4 in. stroke. Piston displacement is 228 cu. in., and h.p. developed is 74 at 3,000 r.p.m. The torque is 150 ft. lb. in the speed range of from 800 to 2,000 r.p.m. Compression ratio is 5.36:1. The cylinder block is of chrome nickel steel, and the cylinders are cast in block, with detachable one-piece head. The crankshaft operates in seven bearings and is counterbalanced with four counterweights. The total bearing area is 88.119 sq. in. The connecting rods are of manganese steel. A 20-gall. tank is mounted at the right side of the frame, and fuel feed is by a mechanical pump. Lubrication is by full force feed through rifle-drilled oil passages.

The clutch is a heavy duty, dry, single plate type, 10 in. diameter, with 108 sq. in. frictional area. The transmission provides four speeds forward, and the helical countershaft drive ensures quiet operation. There is a large size S.A.E. power take-off opening at the right side. The standard gear ratios are:—High, direct; third, 1.94:1; second, 3.63:1; first, 6.72:1; reverse, 8.07:1.

The rear axle is a full-floating new design, with spiral bevel gear drive. Tapered roller bearings are used throughout, with straddle-mounted pinion with four-pinion differential. The standard gear ratio is 5.83:1.

The brakes are of the internal expanding type, applying on all four wheels, with hydraulic actuation. The front brake drums are 15 x 2 in., giving 140 sq. in. of braking surface, and the rear drums are 16 x 2 in., providing 149 sq. in. of surface. The hand brake acts on an external drum at the rear of

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CANADIAN TRANSPORTATION

DECEMBER, 1937

the transmission, with 49½ sq. in. of braking surface.

The front springs are 36 x 2¼ in., with 17 leaves, and the rear ones are 50 x 2½ in., with 15 leaves and rebound plate. The springs are of silico-manganese steel. The frame, with section 7½ in. deep, 3 in. wide and ¼ in. thick, is of carbon steel, S.A.E. no. 1025. This material has section modulus of 6.67, tensile strength of 66,000 lb. per sq. in., yield point of 31,000 lb. per sq. in., and 31% elongation.

The steering gear is of the cam and lever type, and the wheels are of cast spoke type. Chassis lubrication is through Zerk pressure fittings.

Vehicle Size and Weight in United

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In the preliminary Canadian Transportation 405, of the ten Diesel-conventional type bus Car Manufacturing Co. by Associated Equipme Ltd., to the British Ry. Co., it was mention chasses employed in the first to be imported the new A.E.C. electr It was stated that ha

Express Trucks Perform Canadian Pacific Cartage Service

The new system is in operation at Ottawa, Sherbrooke and Montreal, and, effective June 1, is being extended to Three Rivers and St. Hyacinthe.

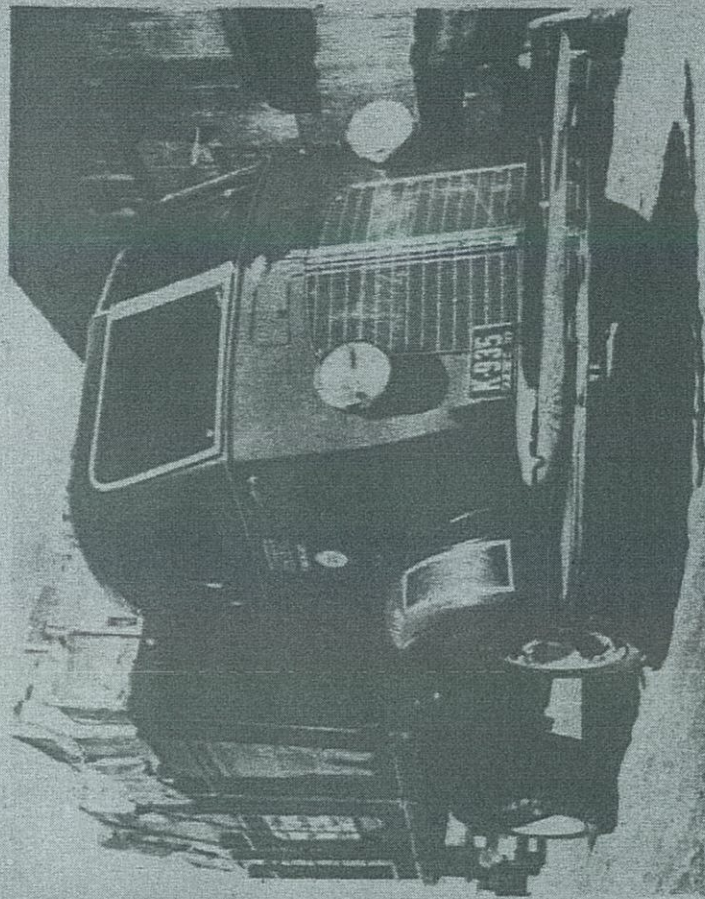
Attention was called in the May issue, pg. 242, by an illustration and caption, to the arrangement placed in effect at Ottawa, March 1, by which trucks operated by the Canadian Pacific Express Co. Cartage Department are performing the pick-up and delivery service for the Canadian Pacific Ry. in connection with the handling of local freight shipments. After only one month's operation in Greater Montreal, where it was begun May 1, the new service has fully demonstrated its value. The Canadian Pacific Express Co. Cartage Department performs for the railway all of the functions ordinarily handled by outside cartage agencies, and brings both the railway and its express subsidiary into closer contact with shippers and consignees.

The drivers operating the cartage vehicles are salaried employees of the Canadian Pacific Express Co. Cartage Department. They are uniformed in blue drill overalls, and windbreaker, with a driver's cap and badge. The cap badge reads "Canadian Pacific" and shows the company's freight crest.

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