GENERAL INFORMATION:

Seven Electric Freight Locomotives
Road Class D

Road numbers of engines now built: 70, 71, 72. To be built: 73, 74, 75, and 76.
Exterior paint scheme: Orange with black trim and lettering, red roof.
Total weight of complete locomotive in running order: 217,000 lb. Weight on drivers: 217,000 lb.
Length over antilimbers: 52'-5" Length over pulling faces: 55'-5"
Width over side sheathing: 9'-3" Extreme width (clearance limit): 9'-11"
Height, top of rail over top of roof: 13'-11" Extreme height (clearance limit): 15'-2"
Truck center spacing, inner trucks: 12'-11" Truck center spacing, outer trucks: 12'-11"
Truck wheelbase: 7'-23" Nominal Wheel diameter: 36" Journal size: 5" x 9"
Builder & Type of Truck: Illinois Terminal Railroad, Number 62-A, MCB form, built at Decatur.

MOTORS AND CONTROL:

Number and type motors: 8 - Westinghouse 571FD1 Rated horsepower, each: 225 at 600 v.
(NOTE: Motor rating is based on use of blowers; a separate blower motor and fan is provided for each motor and is mounted on the side of each truck frame above the elliptic bolster springs.)

AIR Brake EQUIPMENT:

Equipment schedule: Westinghouse Air Brake #14-EL, automatic, with independent engine brakes.
Engineer's Valve: Bracket mounted. Compressors: (2) type D6p. Brake cylinders: (4) 10"x10".
Compressor governor: Type J. Feed Valves: Straight air, 66; Brake pipe, No. Control, 66.

MISCELLANEOUS:

Lighting: 600v. series; 21-36 watt lamps in cab, instrument, engine number lights, electric marker and classification lights, and one 500 watt headlight at each end.
Heating: Six 1200 watt electric heaters in cabs.
Trolleys: Equipped with four poles; two being used in each direction. Have trolley shoes.
Some interesting minor details of these new engines catch the eye on close inspection. For example, the engineer's cab is a very businesslike and scientific looking station. The master controller is of the familiar throttle pattern, but incorporates notches for series, series-parallel and parallel motoring, with field control in parallel. Electrical performance is visually indicated by means of a panel containing speedometer, voltmeter and ammeter, located above the master controller. A multiple push-button station mounted at the right of the engineer's valves controls: reset, horn and front and rear sanders independently. Snap switches for headlight and cab lights, valve for engine bell, and National Pneumatic window wiper complete the auxiliaries in each cab, on the motorman's side.

On the opposite side of the cab there is a walkover seat and a desk for use of the train crew. A recess in the streamline cowling at each end of the cab gives access, thru an end door, to the pumps and to the trolley retrievers. A special push switch on the door post operates the horn, and is used by the trolley man to signal the motorman.

The main control equipment in the center part of the body is separated from the operating cabs by steel partitions, but a passageway along one side of the body communicates between cabs. Heat of the motor grids is dispelled thru louvres on the sides of the cab by an independent blower fan.

SERVICE CONDITIONS: Class D are at present assigned to run tonnage thru fast freight trains between Peoria and Edwardsville, Illinois, about 153 miles, for which they are allowed a scheduled time of 9:15 southbound and 9:55 northbound, an average speed of about 16 mph. The maximum permissible engine speed of 50 mph. is often attained with trains up to the rated load of 1750 tons; this is equivalent to a train of about 30 loads or 50 empties.

In this service, class D locomotives replace class C power, from which they are rebuilt — 70 was 1580, 71 was 1581, 72 was 1591. Class C were built in the period centering about 1923 by the Illinois Traction System at Decatur Shops, utilizing truck-motors and equipment from early passenger cars scrapped about that time, and have eight GE-73 motors, with forced ventilation and weigh 90 tons.

Only the cab and articulated frame were salvaged from Class C for use on Class D; everything else is new. The motors are of a type recently furnished for subway service in New York City.

An interesting departure from former practice in the new design is the location of the operating position at the right hand instead of the left. Prior to this, the Illinois Terminal Railroad Company was one of the very few companies operating electric locomotives (and 2 man passenger cars) with left hand drive.

In moving heavy tonnage trains, particularly when at low speed, the double trolley has been found quite advantageous in reducing burning of shoe and wire, and this arrangement makes for smoother operation at section insulators, since the two poles bridge the insulator and make loss of tractive effort and substation damage at these points much less likely.

Engine Data: W. I. Comant, M.M., ITRRCo.; as recorded by Robert W. Stacy. Photograph: ITRRCo., from "TRAINS". Cooperation of Hulin J. Cross and Robt. V. Mehlembeck in the compilation of this data sheet is also acknowledged.

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