## INSTRUCTIONS FOR ANSWERING QUESTIONS ON OPPOSITE PAGE

The opposite page calls for a classified statement of all the train equipment of the company making this

Table "Equipment owned or leased in service of the respondent," calls for a statement of all equipment report. owned or leased which is in the service of the respondent, and of the number both at the beginning and at the end of the calendar year, and, also of the number added or retired during the year. Equipment which under the system of interchange is temporarily off the line of the reporting company, and equipment which it contributed to the fast

freight line service should, of course, be regarded as in the service of the respondent. Equipment, the title of which rests in Equipment Companies, Car Trusts, and the like, should for the purposes of returns on the opposite page be treated as owned by the respondent. Leased equipment is that which has been acquired directly through lease or other agreement, or incidentally in connection with the lease of the property of another railway company.

For the purpose of this report changes due to the reclassification of equipment should be included in the column headed "Number added during year" and "Number retired during year" for the classes of equipment

Motor Passenger Cars include Gasoline, Gasoline Electric, Storage Battery Electric or other self-propelled affected. passenger cars. Under explanatory remarks show class and number of any cars not equipped with 1. Automatic couplers. 2. Train brakes.

The unit accepted as the basis of comparison is total tractive power, and the formulæ for computing total tractive power for several classes of locomotives named are given below, in which-

T = Total tractive power.

C = Diameter of cylinder in single-expansion locomotives, or of

high pressure cylinder in compound locomotives.

c = Diameter of low-pressure cylinder in compound locomotives.

S = Length of stroke in inches.

D = Diameter of driving wheels in inches.

P=Boiler pressure.

Formulas:

1. For single-expansion locomotives,

$$T = \frac{C^2 \times S \times 0.85 P}{D}.$$

2. For four-cylinder compound locomotives,

$$T = \frac{C^2 \times S \times 2/3 P}{D} + \frac{c^2 \times S \times 1/4 P}{D}.$$

3. For two-cylinder compound or cross-compound locomotives,

$$T = \frac{C^2 \times S \times 2/3 P}{D}.$$

All returns should be stated in whole numbers, that is, decimals or other fractions should not be entered in the results.

In the column headed "Tractive power" should be given the aggregate of the tractive power of the "Number" of locomotives of each class reported, and not the average tractive power per locomotive.

## EXPLANATORY REMARKS

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