

# THE AIR BRAKE

## (PART 2)

### EXAMINATION QUESTIONS

- (1) What will be the effect of a badly worn packing ring in a plain triple? ART. 12.
- (2) What is the best way to locate a sticky triple? ART. 9.
- (3) If the leakage groove in the brake cylinder became stopped up, what would be the result? ART. 15.
- (4) Name the defects that will cause a blow at the exhaust port of a plain triple. ART. 11.
- (5) It has been stated that dirt and cinders clog up the strainer and feed grooves and sometimes work over into the valves. Where does this dirt chiefly come from? Can the trouble be prevented to any extent, and, if so, how? ART. 2.
- (6) If you heard air escaping from the exhaust port of a plain triple, how would you determine, without taking down the triple, whether it was the side valve or the plug cock that was leaking? ART. 11.
- (7) Explain, in detail, how a triple valve should be cleaned and oiled. ART. 13.
- (8) If an auxiliary charges too slowly, to what would you attribute the cause? ART. 2.
- (9) What effect will leaks in the train pipe have on the triple valves? ART. 4.
- (10) Explain how a brake cylinder should be cleaned and oiled. ART. 16.
- (11) What will be the effect if an auxiliary reservoir or its connections leak? ART. 5.
- (12) How would you test a retaining valve? ART. 18.
- (13) Name two defects in a triple valve that will cause the brakes to go into quick action, regardless of the length of the train. ART. 8.
- (14) If you heard a blow at the exhaust port of a quick-action triple, how could you determine whether it was the slide valve or the rubber valve seat that was leaking? ART. 7.

(15) If the expander ring of the brake piston was out of place, how would it affect the working of the brake? ART. 15.

(16) What will be the effect if the strainer in a triple valve is partly stopped up? ARTS. 3 and 8.

(17) Is there any gain in breaking power after the first application of the brakes when the retainers are in use, and, if so, why? ART. 21.

(18) Where would you look for leaks that will reduce auxiliary-reservoir pressure? ART. 5.

(19) Name all the defects in the retaining valve that will cause it to be of no service. ART. 22.

(20) How will a leaky graduating valve affect the operation of the brake? ART. 8.

(21) If a retainer is broken from its pipe, will the brake apply and release properly? Explain clearly.

ANSWER.—Yes. The brake will apply and release as though no retainer were used.

(22) Does a defective graduating spring in a triple valve have the same effect when the train pipe is long as when it is short? Explain fully. ART. 8.

(23) If a retainer is broken from its pipe, should the pipe be plugged? Give reasons.

ANSWER.—No. The air will be prevented from escaping from the brake cylinder and this brake will remain set.

(24) Explain how a "sticky" triple will cause trouble. ART. 8.

(25) Name the different parts of the freight equipment that, if leaking, can cause a blow at the exhaust port of the quick-action triple. ART. 7.

(26) Suppose you had a triple in your train that was giving trouble by going into quick action nearly every time the brake was applied; would it be advisable to allow this triple to continue in operation? If not, what would you do? ART. 9.

(27) If the pipe inside the freight auxiliary reservoir were leaking, what would be the effect? ART. 14.

(28) If the pin that connects the graduating valve 7 to the triple-piston stem is broken, what effect will it have? ART. 8.

(29) State the causes of trouble in the freight equipment, and give the effects in each case. ARTS. 14 and 15.

(30) If a blow occurs at the exhaust port of a quick-action triple on a passenger brake, where would you look for the cause? ART. 7.

(31) The brake on a certain car will not set when a service reduction is made; but, when an emergency reduction is made, it will set, but gradually leaks off. What is the cause of the trouble, assuming the triple valve to be all right? ART. 15.

(32) What is the usual cause of the rubber-seated valve leaking? ART. 7.

(33) If all the auxiliaries did not charge equally fast, what would be the effect if you applied the brakes shortly after recharging? ART. 3.

(34) What difference is there in the blow that occurs at the triple exhaust, due to a leaky slide valve or to a leaky emergency valve? ART. 7.

(35) (a) What will be the effect if the brake-piston release spring is weak or broken? (b) What will be the effect of a split brake-piston rod sleeve? (a) and (b) ART. 15.