

NORTH EASTERN RAILWAY.

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DESCRIPTION

AND

RULES FOR WORKING

OF THE

**AUTOMATIC SIGNALS**

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(HALL SYSTEM).

BETWEEN

Alne Station Signal Box

AND

Green Lane Signal Box.

IN FORCE FROM 4-0 P.M. SUNDAY, 4th JUNE, 1905,

UNTIL FURTHER NOTICE.

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BELL SIGNALS.		Beats on Bell.	How to be given:
Call Attention	...	1	1.
† Train now passing.	Express Passenger Train, or Break-down Van Train going to clear the Line, or Light Engine going to assist disabled Train?	4	4 consecutively.
	Ordinary or Excursion Passenger Train, or Break-down Van Train NOT going to clear the Line?	4	3 pause 1.
	Officers' Special	4	1 pause 2 pause 1.
	Branch Passenger Train?	4	1 pause 3.
	Fish, Meat, Fruit, Horse, Cattle, or Perishable Train composed of Coaching Stock?	5	5 consecutively.
	Empty Coaching Stock Train?	5	2 pause 2 pause 1.
	Fish, Meat, or Fruit Train, composed of Goods Stock; Express Cattle or Express Goods Train? <b>Class A</b>	5	3 pause 2.
	Express Cattle, or Express Goods Train? <b>Class B</b>	5	1 pause 4.
	Through Goods, Mineral or Ballast Train? <b>Class C</b>	5	4 pause 1.
	Ordinary Goods, or Mineral Train stopping at intermediate stations? <b>Class D</b>	3	3 consecutively.
	Branch Goods, Mineral or Ballast Train?	3	1 pause 2.
	Two Trains coupled	5	1 pause 1 pause 3.
	Light Engine, or Light Engines coupled together, or Engine and not more than two Brakes	5	2 pause 3.
	Ballast Train, or other Train requiring to stop in Section?	5	1 pause 2 pause 2.
	* Assistant Engine in rear of Train	4	2 pause 2.
	Train out of section	3	2 pause 1.
	* Obstruction Danger	6	6 consecutively.
	Stop and Examine Train	7	7 consecutively.
Cancelling Signal...	8	3 pause 5.	
Last Train signalled incorrectly described	8	5 pause 3.	
Train passed without Tail Lamp	9	9 consecutively TO BOX IN ADVANCE. 4 pause 5 TO BOX IN REAR.	
Train Divided	10	5 pause 5.	
Opening of Signal Box	15	5 pause 5 pause 5.	
Testing Block Bells and Indicators	16	16 consecutively.	
Closing of Signal Box	17	7 pause 5 pause 5.	
* Time Signal	18	8 pause 5 pause 5.	

† The "Train now passing" signal must be given at the time each train passes the box, and entered in the proper column of the Train Register.

The time the signal is received must also be entered by the man on duty in the box at which it is received.

The "Train out of Section" signal must be sent to the box in rear when the train has got 400 yards ahead of the Home Signal, and the time it is sent and received must be entered in the Train Register.

The "Call Attention" signal must always be given before any other signal, except those marked with an asterisk \*

No signal must be considered as understood until it has been correctly repeated to the Signal Box from which it was received.

RULES FOR THE WORKING  
OF THE  
**AUTOMATIC SIGNALS**  
BETWEEN  
**Alne Station Signal Box**  
AND  
**Green Lane Signal Box.**

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1. The running of trains of all kinds including light engines over the Up and Down Lines in the proper direction will be controlled by these signals.

2. The Automatic Block Sections between Alne Station and Green Lane in each direction are shewn in the following diagram. It will be noticed that each post bears a distinguishing number indicating how many miles it is from York. The posts in each mile are marked A, B, C on the Down line and 1, 2, 3 on the Up:—

3. The Signal Boxes which will continue to be used for signalling trains, and the hours of attendance at each, are as follows :—

Alne .....Always open.

Bishophouse Junction..... Open from 8-20 a.m. till about 7-0 p.m., or until Branch traffic has ceased.

Sessay Wood Junction ....7-0 a.m. to 2-0 a.m. Closed from 2-0 a.m. Sunday to 7-0 a.m. Monday.

Pilmoor Junction ..... 6-0 a.m. to 10-0 p.m. Closed from 10-0 p.m. Saturday to 6-0 a.m. Monday.

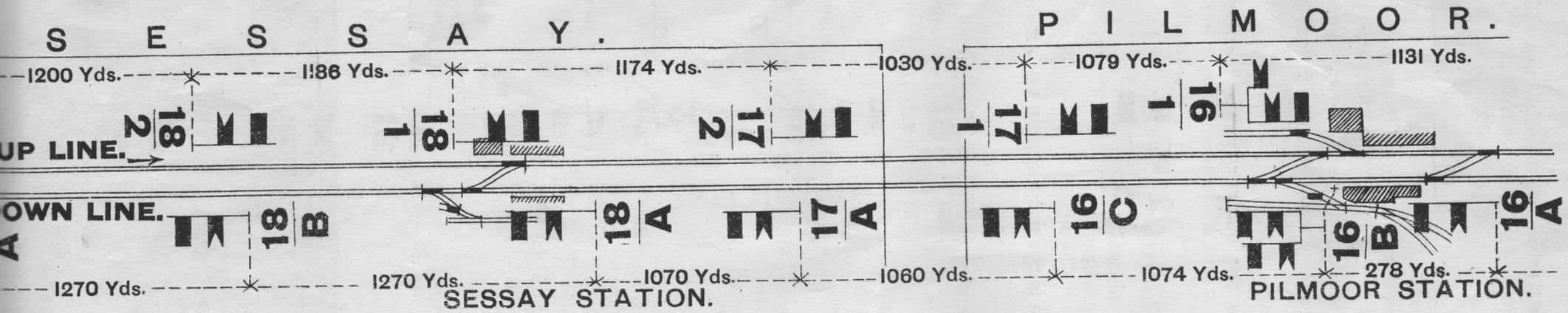
Green Lane .....Always open.

4. The special instructions for the guidance of the Signalmen at Alne, Bishophouse Junction, Sessay Wood Junction, and Green Lane are set out in the Schedule to these Rules.

5. The signal boxes at Raskelf and Sessay are not used for Train Signalling purposes except during foggy weather or snowstorms, but information will be sent from Raskelf and Sessay Boxes to the nearest open box on each side of any alteration in the order of trains passing these boxes due to the shunting of any train at either place. The man on duty at Raskelf or Sessay must not alter the order of trains or stop any train not booked to call, without first advising and obtaining permission from the nearest open box on each side, except in case of accident or other emergency, when the nearest box on each side must be at once informed of the circumstances. Codbeck is closed entirely.

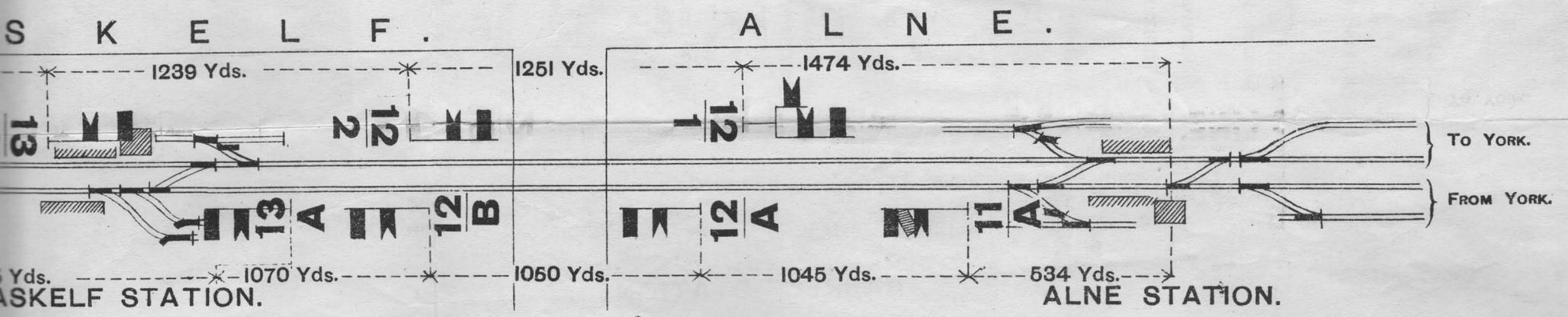
6. The signals to be used from one open box to the next open box are those set out on page 1 of these regulations, and those signals must be exchanged and registered in the same manner as in ordinary double line block signalling.

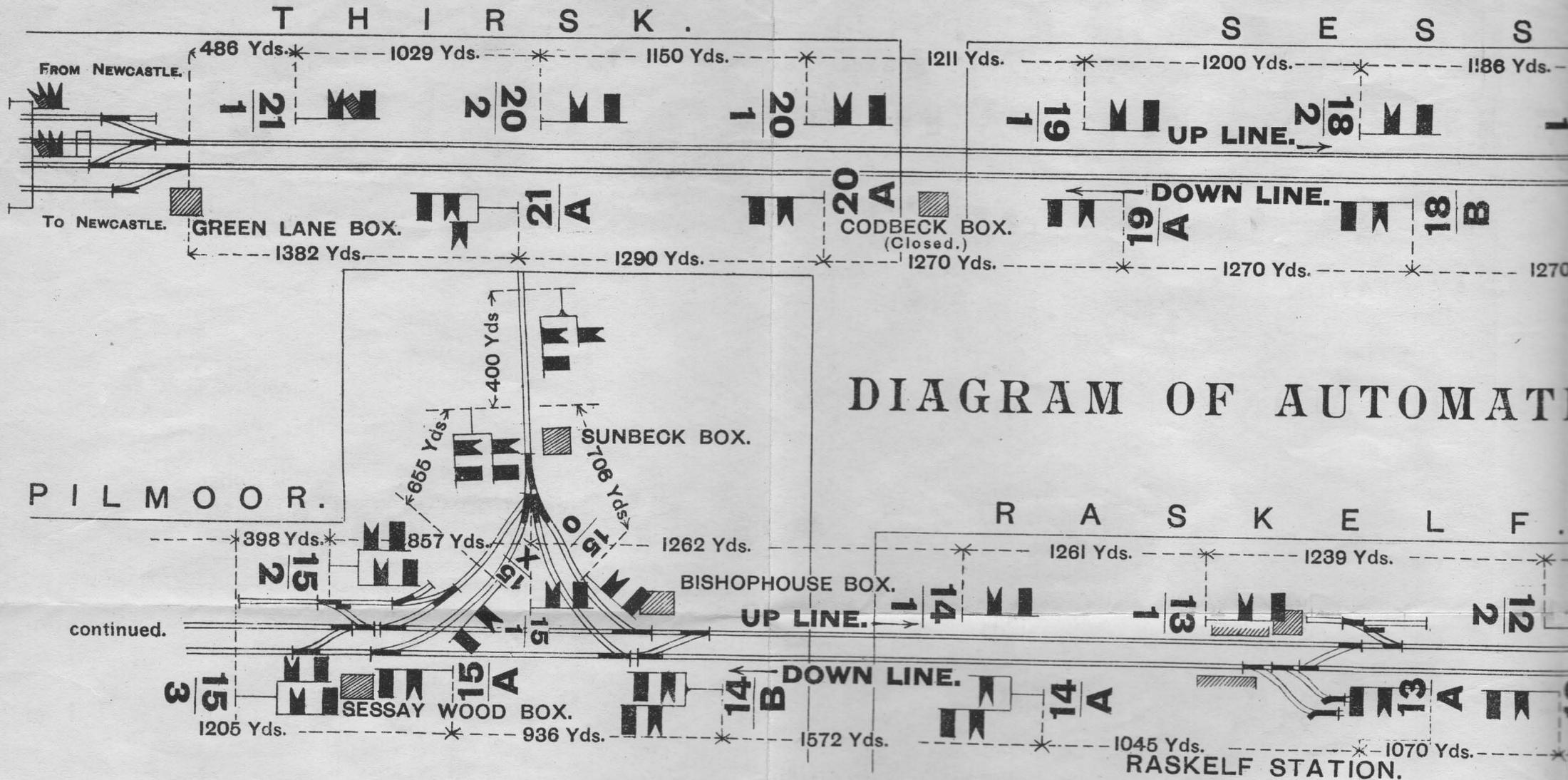
7. Ordinary block working at the signal boxes between Alne Station and Green Lane inclusive will be discontinued except during foggy weather or snow-storms as set out in Nos. 28 to 32 of these regulations.



for continuation see below.

OF AUTOMATIC SECTIONS.





# DIAGRAM OF AUTOMAT

**NOTES—**

- 15/A and 15/X Stand opposite each other.
- 15/0 and 15/1 do.

8. The space between two automatic signal posts constitutes an *Automatic Block Section*, and it is to these sections as defined below that the Automatic Signals apply.

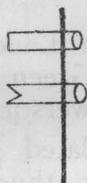


For a train travelling in the direction of A. B. C. D. A B is the "Section in Advance" from A.

B C is the "Second Section in Advance" from A.

A B is the "Section in Rear" from B, and the "Second Section in Rear" from C.

9. On each signal post are two signal arms, namely, a home signal for the section in advance, and a distant signal for the second section in advance.



Home Signal (for section in advance).

Distant Signal (for *second* section in advance).

The normal position of each signal arm is the horizontal position danger.

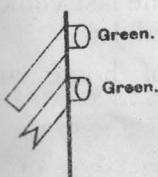
10. The indications which may be given by the signal arms are as shown below :—

By night.

By day.

(a)

(a)



Green.

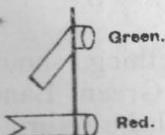
Green.



(a) This indicates that the line is clear for two sections in advance. The train may proceed.

(b)

(b)



Green.

Red.

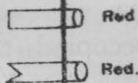


(b) This indicates that the section in advance is clear whilst the second section in advance is occupied.

The Driver may proceed, keeping a sharp look-out, and at such a speed that he can bring his train to a stand before reaching the next home signal if it is at danger.

(c)

(c)



Red

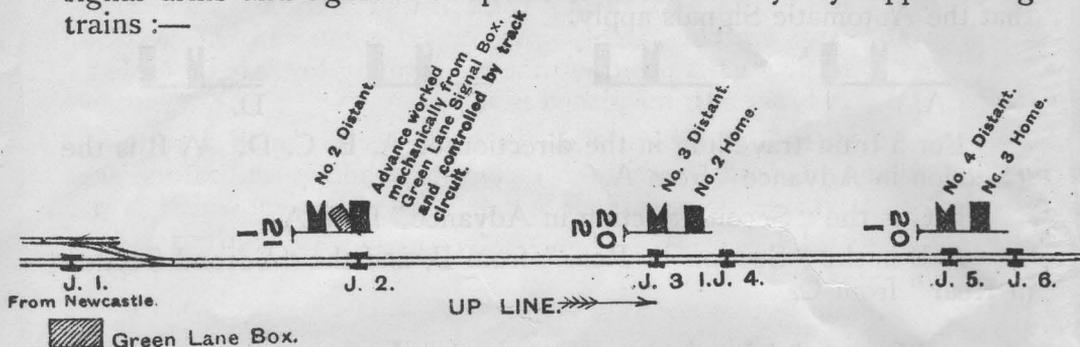
Red.



(c) This indicates that the section in advance is occupied.

The train must be brought to a stand before reaching the signal post. See Rules 17 & 18.

II. The following is a description of the manner in which the signal arms and lights are operated automatically by approaching trains :—



(The letter J. means Insulated Joint.)

### (a) Line clear as far as J.6.

Assume a train approaching Green Lane, and *that the line is clear for two sections in advance*, the Green Lane Up Advance is free, and the signalman at Green Lane lowers it.

The train by passing over the insulated joint at J.1. lowers the No. 2 home and then No. 2 distant, thus indicating that the second section in advance is clear. (These home and distant signals are marked in the diagram No. 2 because they protect the second section in advance).

On passing over J.2. the No. 3 home signal is lowered and also No. 3 distant, provided the third section is clear.

As soon as the engine passes over the joint at J.2. the Green Lane Up advance signal and No. 2 distant are returned automatically to danger, the former remaining electrically locked until the last vehicle of the train has passed J.4., and the latter till it has passed J.6.

The same operations are repeated for each set of home and distant signals as the train passes over each joint.

### (b) Line clear as far as J.4.

If when the train passes over J.1. the second section in advance of Green Lane is occupied, the No. 2 distant signal will remain at danger.

If, after the train has passed No. 2 distant, anything should occur to obstruct the second section in advance from Green Lane, the No. 2 home signal and No. 3 distant signal will both be returned automatically to danger.

In each case the signals controlling a section will not fall to the clear position unless the line is clear for a distance of 400 yards beyond that section.

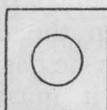
If the section in advance of Green Lane is occupied, the Green Lane advance signal cannot be lowered.

12. The following circumstances will prevent the signals controlling a section falling to the "All right" position:—

- (1) A train or portion of a train in that section.
- (2) Any switch, catch-points, or cross-over in the section set in such a position that the running line can be fouled.
- (3) A broken or misplaced rail.

13. At every box where there is a connection with a running line by means of points, whether facing or trailing, indicators are provided in a visible position in the box, the object of which is to show the state of the section in advance and of two sections in the rear of the points.

14. The indicators are as shewn below:—



- (1) The indicator (at "All right") shews that the section in advance or two sections in the rear are clear of any obstruction as the case may be.



- (2) The indicator (at danger) shews that there is an obstruction in some or one of three sections, viz., the section in advance or two sections in rear.

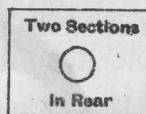
There is one indicator for the two sections in rear and one for the first section in advance, except at Green Lane and Alne. The indicators at Green Lane are as follows:—

#### GREEN LANE.

Up.



Down.



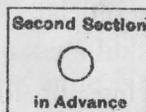
And those at Alne are as follows:—

#### ALNE.

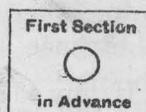
Up.



Down.



Down.



15. If a signal arm should hang in an unusual or improper position, or if there be no light or an improperly displayed light at night in either a home or distant signal, this must be considered a DANGER signal, and treated accordingly.

16. No points connecting with a running line protected by automatic signals must under any circumstances be operated by trainmen, or by anyone except the man on duty at the levers by which the points are moved.

17. When a train has stood at a home signal at danger for one minute, if there be no box or if no signalman is on duty at the box, the driver may after that period pass the signal at DANGER, proceeding with great caution to the next home signal, at which he must also stop one minute if it is against him, and repeat this at each home signal found at danger. The train must be run at such a speed that it can be stopped short of any obstruction.

18. Before a train is allowed to pass at danger a home signal fixed at or near a box where a signalman is on duty, his permission, in writing, must be obtained, and when such permission has been given, the driver must proceed and act as stated in the previous paragraph.

19. If a train is permitted by the signalman on duty to enter a block section without the driver having seen the distant signal for the section in advance of the section into which he has entered, from a siding or through a junction or cross-over, it must proceed to the next home signal at such a speed only that it can be stopped before reaching such signal if it is at danger.

20. Care must be taken that all vehicles in sidings are left within the catch-points.

21. During foggy weather or falling snow the driver must approach all signals at such a speed as will enable him to interpret them correctly, and if necessary he must stop to enable him to see the signals. If there be any doubt as to the indication of a home signal, the train must be run at such a speed that it can be stopped short of any obstruction that may be encountered.

22. All trainmen must at all times bear in mind that safety is of greater importance than time.

23. All delays, other than those known to have been caused in ordinary course by a train in a section in advance, must be reported immediately by the Guard, in addition to the usual entries in his journal, or in the case of a light engine by the Driver, to the nearest Signalman or other responsible official, who must advise the Station Master in advance.

24. If any defect hindering, or likely to hinder the due and proper working of the automatic signals, is noticed by any employee on the line, steps should at once be taken to communicate with all officials concerned, so that the defect may be remedied without delay.

25. No employee other than the properly authorised employees of the Engineers' Department in charge of signals is permitted to make the wire connections of the rails, or do any work whatsoever in connection with the automatic signalling appliances.

26. Should any signals be observed not to work satisfactorily, information must immediately be conveyed to the persons attending to the electric work ; and if any signal should be showing a bad light, or if the light is out, it should be immediately put right if possible or relighted by the person observing it, and the matter reported to the nearest Station Master. If the bad light is clearly due to a fault in the signal and not in the lamp, the person in charge of the electric work must at once be advised.

27. At Raskelf, Bishophouse Junction, Sessay Wood Junction, Pilmoor Junction and Sessay boxes, levers are provided, interlocked with the Track Circuit and the other levers in the box, to enable the Signalmen to keep at danger the signals for the "Section in Rear" and the "Second Section in Rear" when it is necessary to do this to admit of shunting operations being performed, or for any other duly authorised purpose, and before these levers are returned to their normal position, the Switchman must ascertain by personal observation, if possible, or by enquiry of the person in charge of the shunting operations, whether the line is clear of obstruction, and after returning them he must see that the indicators return to the clear position, provided there is no train in sections.

#### **TELEPHONE CIRCUITS.**

28. A through circuit is provided from Alne Station Box to Green Lane Box, having call-bells in the Station Masters' houses at Raskelf, Pilmoor and Sessay, and in the Raskelf, Bishophouse Sessay Wood, Pilmoor and Sessay Signal Boxes

29. There are also short telephone circuits as under :—

Alne Signal Box to Ganger's house, Alne Station.

Raskelf Station Master's house to Platelayer's house, Raskelf Station.

Pilmoor Station Master's house to Ganger's house, Sessay Wood Cottages.

Sessay Station Master's house to Platelayer Smith's house on line side about  $\frac{1}{2}$  mile North of Sessay Station.

Green Lane Signal Box to Ganger's house.

#### **WORKING DURING FOG OR SNOWSTORM.**

30. When a fog comes on in the neighbourhood of Alne, Pilmoor or Green Lane, the Signalmen at these places must immediately communicate with each other by telephone, and whether the fog is prevalent at one or more places, one of the Signalmen

concerned must immediately call up the three Station Masters on the telephone and apprise them of the state of affairs, requesting them to make the necessary arrangements for calling Signalmen and Groundmen to take duty at all the boxes mentioned in Rules 4 and 5, except Bishophouse Junction and Codbeck. When Pilmoor is closed the Signalmen at Alne and Green Lane must arrange. As soon as the intermediate Signalmen are on duty, the arrangement of Automatic Signalling must cease and ordinary double line Block Telegraph working be brought into operation. Until Signalmen have come on duty at the intermediate boxes, trains will be worked from Alne and Green Lane on the time limit as follows:—

A passenger train following a Goods train, a margin of 20 minutes to be observed.

A Goods train following a passenger train, a margin of 10 minutes to be observed.

31. As the several Signalmen come on duty, and Block Telegraph working is established, the arrangement of time limit between the boxes affected will cease. For instance, if the Signalmen at Pilmoor and Sessay Wood open their boxes before Sessay and Raskelf, the arrangement of time limit would operate—Green Lane to Pilmoor and Sessay Wood to Alne, ordinary Block Telegraph being worked between Pilmoor and Sessay Wood Junction.

32. Immediately one of the intermediate men takes duty, he must call up Green Lane and Alne apprising the men at these places that he has taken duty, after which he will exchange the "Testing" signals, and when this has been done, hand to the driver of the first train passing an extract as directed at page 15, paragraph 25, Block Telegraph Regulations, and in this way establish block working with the box open on each side.

33. The bringing into use of the Automatic Signals does not relieve the staff engaged in the signalling and working of trains, or men employed on the line, of the responsibility for seeing that the instructions contained in the Company's Book of Rules and Regulations, Block Telegraph Regulations, Appendices, or other notices regarding the safe and proper working of trains, signals, etc., are carried out, except such rule or portion of rule as may be modified or rendered inapplicable by any of the instructions herein contained.

**SCHEDULE REFERRED TO IN RULE 4.**

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**Instructions to Signalmen at Alne Station Box as to method of Signalling Trains passing between the Automatically Signalled Sections on the one side and the Section Signalled by Block Telegraph on the other.**

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1. **DOWN TRAINS.** The usual mode of signalling by block telegraph is in operation at Tollerton, and the Signalman at Alne on receiving the IS LINE CLEAR signal from Tollerton must accept the signal in the usual way if the line is clear to his Advance signal, and peg his indicator to the LINE CLEAR position. He must at the same time enter the time of receiving the signal in his Block Register.

On receiving the TRAIN ENTERING SECTION signal from Tollerton, the Signalman at Alne must acknowledge the signal and peg his block indicator to TRAIN ON LINE, and if his indicator shows "Second Section in Advance" clear, he must lower his signal for the train to enter Automatic area, and then simply record the receipt of the signal in his Block Register.

As soon as a train has reached his Box he must send to the nearest open Box on the Automatic area the appropriate TRAIN NOW PASSING bell signal as set out on page 1.

When the train has passed the Down advance and is continuing its journey in the Automatic area, the Signalman at Alne must give the usual TRAIN OUT OF SECTION signal to Tollerton.

2. **UP TRAINS.** On receiving the TRAIN PASSING bell signal from the nearest open Box on the Automatic area, the Signalman at Alne must send the appropriate IS LINE CLEAR signal to Tollerton as soon as he considers it necessary, in order to avoid delay, taking all the circumstances into account and in accordance with clause (a) of Block Telegraph Regulation 3.

## SCHEDULE REFERRED TO IN RULE 4.

—◆◆—

**Instructions to Signaller at Bishophouse Junction Box as to method of Signalling Trains passing between the Automatically Signalled Sections on the one side and the Section to or from Sunbeck Junction Signalled by Block Telegraph on the other.**

—◆◆—

1. **DOWN TRAINS.** On receiving the TRAIN PASSING bell signal from Alne, the Signaller must send the appropriate IS LINE CLEAR signal to Sunbeck Junction as soon as he considers it necessary, in order to avoid delay, taking all the circumstances into account and in accordance with Block Telegraph Regulations 3 and 4.

2. **UP TRAINS.** The usual mode of signalling by Block Telegraph is in operation at Sunbeck Junction, and the Signaller on receiving the IS LINE CLEAR signal from Sunbeck Junction must accept the signal in the usual way if the line is clear to his advance signal and no train is approaching his home signal on the Up main line, and peg his indicator to the LINE CLEAR position. He must at the same time enter the time of receiving the signal in his Block Register.

On receiving the TRAIN ENTERING SECTION signal from Sunbeck Junction, the Signaller must acknowledge the signal and peg his Block indicator to TRAIN ON LINE.

As soon as a train has reached his Box he must send to Alne the appropriate TRAIN NOW PASSING bell signal as set out on page 1.

When the train has passed the Up home signal 400 yards and is continuing its journey in the Automatic area, the Signaller must give the usual TRAIN OUT OF SECTION signal to Sunbeck Junction.

As the Up releasing lever controls the Home signal at Sunbeck Junction leading towards Bishophouse Junction, it is necessary that this releasing lever should be pulled when a train is accepted from Sunbeck Junction, otherwise the signal cannot be lowered for a train to pass.

**SCHEDULE REFERRED TO IN RULE 4.**

—◆—

**Instructions to Signalmen at Sessay Wood Junction Box as to the method of Signalling Trains passing between the Automatically Signalled Sections on the one side and the Section to and from Sunbeck Junction Signalled by Block Telegraph on the other.**

—◆—

1. **DOWN TRAINS.** The usual mode of signalling by Block Telegraph is in operation at Sunbeck Junction, and the Signalman on receiving the **IS LINE CLEAR** signal from Sunbeck Junction must accept the signal in the usual way if the line is clear for 400 yards ahead of his Home Signal and no train is approaching on the Up main line, and peg his indicator to the **LINE CLEAR** position. He must at the same time enter the time of receiving the signal in the Block Register.

On receiving the **TRAIN ENTERING SECTION SIGNAL** from Sunbeck Junction, the Signalman must acknowledge the signal and peg his block indicator to **TRAIN ON LINE**.

As soon as a train has reached his Box he must send to the nearest open Box on the Automatic area the appropriate **TRAIN NOW PASSING** bell signal as set out on page 1.

When the train has passed 400 yards beyond his Down Home Signal, and is continuing its journey in the Automatic area, the Signalman must give the usual **TRAIN OUT OF SECTION** signal to Sunbeck Junction.

2. **UP TRAINS.** On receiving the **TRAIN PASSING** bell signal from the nearest open Box on the Automatic area, the Signalman must send the appropriate **IS LINE CLEAR** signal to Sunbeck Junction as soon as he considers it necessary in order to avoid delay, taking all the circumstances into account and in accordance with clause (a) of Block Telegraph Regulation 3.

As the Up and Down releasing levers control the Home signal at Sunbeck Junction leading towards Sessay Wood Junction, it is necessary for these releasing levers to be pulled when a train is accepted from Sunbeck Junction, otherwise the signal cannot be lowered for a train to pass.

## SCHEDULE REFERRED TO IN RULE 4.

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**Instructions to Signalmen at Green Lane Box as to method of Signalling  
Trains passing between the Automatically Signalled Sections on the one  
side and the Section Signalled by Block Telegraph on the other.**

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1. **DOWN TRAINS.** On receiving the TRAIN PASSING bell signal from the nearest open Box on the Automatic area, the Signalman at Green Lane Box must send the appropriate IS LINE CLEAR signal to Thirsk South Junction as soon as he considers it necessary in order to avoid delay, taking all the circumstances into account and in accordance with clause (a) of Block Telegraph Regulation 3.

2. **UP TRAINS.** The usual mode of signalling by Block Telegraph is in operation at Thirsk South Junction, and the Signalman at Green Lane on receiving the IS LINE CLEAR signal from Thirsk South Junction must accept the signal in the usual way if the line is clear to his Advance Signal, and peg his indicator to the LINE CLEAR position. He must at the same time enter the time of receiving the signal in his Block Register.

On receiving the TRAIN ENTERING SECTION signal from Thirsk South Junction the Signalman at Green Lane must acknowledge the signal and peg his block indicator to TRAIN ON LINE.

The Signalman must not lower his Advance signal until the indicator shows "First Section in Advance" clear.

As soon as a train has reached his Box he must send to the nearest open Box on the Automatic area the appropriate TRAIN NOW PASSING bell signal as set out on page 1.

When the train has passed the Up advance and is continuing its journey in the Automatic area, the Signalman at Green Lane must give the usual TRAIN OUT OF SECTION signal to Thirsk South Junction.

**H. A. WATSON,**

*General Superintendent.*

YORK, 24th May, 1905.