

CANADIAN PACIFIC RAILWAY  
COMPANY

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GENERAL, TRAIN  
AND  
INTERLOCKING RULES



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**Canadian Pacific Railway  
Company**

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**GENERAL, TRAIN,  
AND  
INTERLOCKING RULES**

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Adopted by By-law No. 87, passed by the  
Board of Directors on June 10th, 1901,  
and approved by  
**His Excellency the Governor-General-in-Council**  
on August 10th, 1901.

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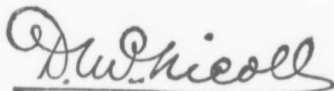
# INDEX.

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	PAGE
General Notice.....	4
General Rules.....	5
Definitions .....	8
Standard Time.....	10
Time Tables .....	11
Signal Rules—	
Color Signals .....	13
Hand, Flag, and Lamp Signals.....	14
Engine Steam Whistle Signals .....	15
Air Whistle or Bell Cord Signals.....	17
Train Signals.....	17
Fixed Signals.....	19
Use of Signals .....	20
Classification of Trains .....	22
Movement of Trains .....	22
Movement by Train Orders.....	35
Forms of Train Orders.....	44
Examples of Combination Orders.....	58
Interlocking Rules.....	63
Instructions to be observed in cases of Personal Injury .....	70

The rules herein set forth govern the railways operated by the Canadian Pacific Railway Company. They supersede all previous rules and instructions inconsistent therewith.

Special instructions may be issued by proper authority.



*Second Vice-President and General Manager*

### GENERAL NOTICE.

To enter or remain in the service is an assurance of willingness to obey the rules.

Obedience to the rules is essential to the safety of passengers and employees, and to the protection of property.

The service demands the faithful, intelligent, and courteous discharge of duty.

To obtain promotion, capacity must be shown for greater responsibility.

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## GENERAL RULES.

A. Every employee whose duties are prescribed by these rules, must have a copy of them accessible when on duty.

B. Special instructions, issued by proper authority, must be observed.

C. Employees must be conversant with the rules, and obey them. If in doubt as to their meaning, they must apply to proper authority for an explanation.

D. Persons employed in any service on trains are subject to the rules.

E. Employees must render every assistance in their power in carrying out the rules.

F. Any violation of the rules must be reported.

G. The use of intoxicants by employees, while on duty, is prohibited. Their habitual use, or the unnecessary frequenting of places where they are sold, while not on duty, is sufficient cause for dismissal.

H. The use of tobacco by employees when on duty in or about passenger stations, or on passenger cars, is prohibited.

I. Employees, on duty, must wear the prescribed badge and uniform, and be neat in appearance.

J. Employees must be courteous and considerate in their dealings with the public, especially with passengers and other patrons of the Company.

K. Persons authorized to transact business at stations or on trains, must be orderly and avoid causing annoyance to passengers.

L. In case of danger to the Company's property employees must unite to protect it.

M. Employees must always be vigilant to protect, and must promptly report anything detrimental to, the Company's interests.

N. An employee dismissed from or leaving the service must not be re-employed without the consent of the head of the department in which he was employed, unless he surrenders a certificate of satisfactory service.

O. Persons previously employed on another railway, if given employment, must not be retained in the service of the Company unless satisfactory evidence in writing is obtained as to previous good record.

P. Persons whose hearing, sight, or color perception, is known to be defective, must not be employed in any capacity where such defect may endanger the safety of life or property.

Q. Employees must pass the required examinations.

R. Employees must devote themselves exclusively to the Company's service, attending during the prescribed hours, and residing wherever required. They must not, directly or indirectly, engage in any other business or trade without permission from the proper officer. Employees who are liable to be called upon for duty at any time, must keep the proper officer advised as to where they can be found.

S. Employees must on leaving, return all property of the Company which should be in their possession, making good any loss, or damage done to it through misuse or neglect.

T. Supplies and material must be properly and economically used and cared for. Scrap and other material of value must be turned in to the Company.

U. Unless authorized to do so, employees must not receive or pay out money on the Company's account or use the Company's credit.

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V. The giving of presents by employees to their superiors and the acceptance by employees of gratuities or rewards from patrons of the Company are prohibited.

W. The Company reserves the right to deduct from the pay of its employees: fees for medical attendance; rents, where employees are its tenants; and fines for neglect of duty. Fines will be credited to a fund to be devoted to the benefit of employees.

X. Employees must not subject the Company to the service of a Garnishee Order on their wages or assign their wages without permission. They must reimburse the Company any expense thereby incurred.

Y. All accidents involving injury to person, or damage to track, structures, or rolling stock, must be reported promptly by telegraph to the proper officer, and confirmed by mail. In case of injury to person, the names and addresses of as many witnesses as possible must be obtained.

Z. Cars must not be placed on the main track to be loaded or unloaded unless authorized by a train order.

AA. Wood, lumber, stone, or other material, must not be piled within six feet of the rails.

BB. Employees must familiarize themselves with the location of all structures and obstructions along the line that will not clear them when on top or side of cars or engines.

CC. The telegraph must not be used unless advisable in the Company's interests, and telegrams must be as brief as possible consistent with clear understanding.

DD. Employees desirous of appealing to the head of the department must do so through the proper officer.

## DEFINITIONS.

**TRAIN.**—An engine, or more than one engine coupled, with or without cars, displaying markers, the movement of which on the main track has been authorized by time-table or train orders.

**REGULAR TRAIN.**—A time-table train. It may consist of sections.

**SECTION.**—One of two or more trains running under the same schedule, displaying green signals or for which green signals are displayed.

**EXTRA TRAIN.**—A train not authorized by the time-table.

**SUPERIOR TRAIN.**—A train having right to track over another train.

A train may be made superior to another train either by TRAIN ORDER or by SCHEDULE.

TRAIN ORDER is superior to SCHEDULE.

**SUPERIOR DIRECTION.**—As specified in the time-table. The direction in which regular trains are superior to trains of the same class in the opposite (inferior) direction.

**TIME-TABLE.**—The authority for the movement of regular trains subject to the rules. It contains the classified schedules of trains, with special instructions relating thereto.

**SCHEDULE.**—That part of a time-table which prescribes the direction, class, number, and movement of a regular train.

**MAIN TRACK.**—A track upon which trains are operated by time-table or train orders.

**SINGLE TRACK.**—A main track upon which trains are operated in both directions.

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**DOUBLE TRACK.**—Two main tracks upon one of which the current of traffic is in a specified direction, and upon the other in the opposite direction.

**SIDING.**—A track auxiliary to the main track for meeting or passing trains.

**YARD.**—Tracks within defined limits over which movements not authorized by time-table or by train orders, may be made, subject to prescribed signals and regulations.

Yard limits are defined by yard limit signals or by yard limit boards.

**YARD ENGINE.**—An engine assigned to yard service, and working within yard limits.

**STATION.**—The place, designated on the time-table, at which there is a train order office or a siding, or at which the train stops to receive or discharge traffic.

**FIXED SIGNAL.**—A signal of fixed location, having two or more indications, affecting the movement of a train.

**PILOT.**—A person assigned to a train when the engineer or conductor, or both, is or are not fully acquainted with the physical characteristics or running rules of the road, or portion of the road, over which the train is to be moved.

# TRAIN RULES FOR SINGLE TRACK.

## STANDARD TIME.

1. Standard Time, obtained from McGill Observatory at Montreal, will be telegraphed daily to all points in the following manner:—A single dash every alternate second will be sent commencing at 11.54 a.m. Eastern Time until 11.54.50 a.m., when there will be a pause until 11.55 a.m. when a double dash will be sent every alternate second until 11.55.50 a.m., when there will be a pause until 11.56 a.m. when a quick double dash will be sent and the circuit closed.

1 (a). Employees in charge of the Company's clocks must compare them daily with Standard Time, and, if they vary more than ten seconds, correct them, setting them at 11.55 a.m. and checking them with Standard Time at 11.56 a.m. They must also see that their watches show the correct time.

2. Trainmasters, Road Foremen of Locomotives, Locomotive Foremen, Roadmasters, Bridge and Building Masters, Conductors, Engineers, Firemen, Train Bag-gagemen, Brakemen, Yardmasters, and Yard Foremen, must use watches that have been examined and certified by a designated inspector as being of the required standard of excellence. The certificate, in prescribed form, must be renewed every January and July.

2 (a). Employees who are required to use Standard Watches must submit them to a designated inspector for comparison, and record, during the first and the third week of every month, or, if no designated inspector is accessible during any such period, as soon as possible

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thereafter. They must not regulate them, or, unless they stop owing to failure to wind, set them themselves.

3. Conductors, engineers, and pilots, must, before starting on each trip, compare their watches with a clock, designated as a Comparison Clock, if there is one at the starting point. If not, they must compare them daily with some Comparison Clock unless one is not accessible, in which event they must compare them daily with Standard Time obtained from the train dispatcher. The comparison of watches with Comparison Clocks must be registered on the prescribed form.

3 (a). Before starting on any trip, conductors and engineers must compare their watches, each seeing the time by the other's watch, and they must compare their watches with those of their brakemen and firemen respectively.

3 (b). Trainmasters, Road Foremen of Locomotives, Locomotive Foremen, Roadmasters, Bridge and Building Masters, Yardmasters, Yard Foremen, Train Baggage-men, Brakemen, and Firemen, must, if possible, compare their watches daily with a Comparison Clock.

3 (c). Roadmasters and Bridge and Building Masters must, whenever opportunity offers, compare their watches with those of their Foremen, and must see that the latter are correct.

### TIME-TABLES.

4. Every employee whose duties are connected with the movement of trains must have a copy of the current time-table accessible when on duty.

4 (b). Each time-table, from the moment it takes effect, supersedes the preceding time-table. A train of the preceding time-table must retain its train orders, and take the schedule of the train of the same number on the new

time-table, unless that train is due, on the new time-table, to start from its initial point on that section or branch within twelve hours from the moment the new time-table takes effect, in which case the train of the preceding time-table loses all its rights at the moment the new time-table takes effect and can thereafter proceed only by train order.

A train of the new time-table which has not the same number on the preceding time-table, must not run on any section or branch until it is due to start from its initial point on that section or branch, after the time-table takes effect.

5. Not more than two times are given for a train at any point: where one is given, it is, unless otherwise indicated, the leaving time; where two, they are the arriving and the leaving time: but in all cases trains must clear and follow trains as prescribed by the rules.

Scheduled meeting or passing points are indicated by figures in **full-faced type**.

Both the arriving and leaving time of a train are in **full-faced type** when both are meeting or passing times, or when one or more trains are to meet or pass it between those times.

Where there are one or more trains to meet or pass a train between two times, or more than one train to meet or pass a train at any point, attention is called to it by small figures showing numbers of trains to be met or passed.

6. The following signs, when placed before the figures of the schedule, indicate:

“ s ”—regular stop.

“ f ”—flag stop to receive or discharge passengers or freight.

“ l ”—leave.

“ a ”—arrive.

6 (a). The following signs in a time table, indicate :

“ D ”—Day telegraph office.

“ N ”—Night telegraph office.

“ W ”—Water.

6 (b). The names of stations at which there are sidings (for meeting or passing trains) are printed in **full-faced type**.

### SIGNAL RULES.

7. Employees whose duties may require them to give signals, must provide themselves with the proper appliances, and keep them in good order and ready for immediate use.

8. Flags of the prescribed color must be used by day, and lamps of the prescribed color by night.

9. Night signals are to be displayed from sunset to sunrise. When weather or other conditions obscure day signals, night signals must be displayed in addition to day signals, except that night will be displayed instead of day markers.

### VISIBLE SIGNALS.

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#### COLOR SIGNALS.

COLOR.	INDICATION.
(a) Red.	Stop, and as prescribed by rule 26 (a).
(b) Green.	Proceed, and as prescribed by rule 26 (a).
(c) Yellow.	Proceed with caution.
(d) Green and white.	Flag stop. See rule 28.
(e) Blue.	See rule 26.

11. A fusee, on or near the track, burning red, must not be passed until burned out. When burning yellow, it is a caution signal. Fusees must not be used near public crossings, or on bridges, or where they may communicate fire.

12. HAND, FLAG, AND LAMP SIGNALS.

MANNER OF USING.	INDICATION.
(a) Swung across the track.	Stop.
(b) Raised and lowered vertically.	Proceed.
(c) Swung vertically in a circle across the track.	} Back.
(d) Swung vertically in a circle at arm's length across the track.	} Train has parted.
(e) Swung horizontally in a circle.	} Answer to 14 (j).
(f) Held at arm's length above the head. If not responded to, lowered slowly to the ground and raised slowly again to the position above head.	} Apply air brakes.
	} Release air brakes.

13. Any object waved violently by any one on or near the track is a signal to stop.

## AUDIBLE SIGNALS.

## 14. ENGINE STEAM WHISTLE SIGNALS.

NOTE.—The signals prescribed are illustrated by "o" for short sounds "—" for longer sounds. The sound of the whistle should be distinct, with intensity and duration proportionate to the distance signal is to be conveyed.

SOUND.	INDICATION.
(a) o	Stop. Apply Brakes.
(b) o o	Answer to any signal not otherwise provided for.
(c) o o o	When train is standing, back. Answer to 12 (c) and 16 (d).
(d) o o o	When train is running, will stop at next station. Answer to 10 (d) and 16 (e).
(e) o o o o	Call for a signal.
(f) o —	When double heading, air brakes have failed on leading engine and second engine is to take control of them. Answer to 14 (f); to be given by second engine as soon as it has control of air brakes.
(g) o — o	Notice to trackmen and others of fire or stock on line, or that their services are required.
(h) o o —	Answer to 14 (m).
(i) — —	Proceed. Release brakes.
(j) — — —	When running, train parted; to be repeated until answered by 12 (d). Answer to 12 (d).
(k) — — — —	Flagman return from west or south.
(l) — — — —	Flagman return from east or north.

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SOUND.	INDICATION.
(m) — o o	To call the attention of all trains of the same or inferior class and of trains of superior class affected by them, to green signals displayed for a following section.
(n) — o o o	Train will stop. Flagman drop off, or go back, and protect rear of train.
(o) — — o o	At whistle posts and approaching public crossings at grade.
(p) —————	Approaching stations, junctions, drawbridges, and railway crossings at grade.
(q) A succession of short sounds.	An alarm for persons or cattle on the track. Notice to trainmen of danger ahead.

15. One torpedo explosion is a signal to stop; the explosion of two torpedoes, not more than 200 feet apart, is a caution-signal. Torpedoes must not be placed at public crossings or stations where persons may be injured by their explosion.

- (a) One  
 (b) Two  
 (c) Two  
 (d) Three  
 (e) Three  
 (f) Four  
 (g) Four  
 (h) Five  
 (i) Five  
 (j) Six  
 (k) Seven

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## 16. AIR WHISTLE OR BELL-CORD SIGNALS.

SOUND.	INDICATION.
(a) One.	When train is running, train parted (Bell cord only).
(b) Two.	When train is standing, start.
(c) Two.	When train is running, stop.
(d) Three.	When train is standing, back.
(e) Three.	When train is running, stop at next station.
(f) Four.	When train is standing, apply or release air brakes.
(g) Four.	When train is running, reduce speed.
(h) Five.	When train is standing, call in flagman.
(i) Five.	When train is running, increase speed.
(j) Six.	When train is running, furnish more steam for heating.
(k) Seven.	When train is running, release brakes or a sticking brake.

## TRAIN SIGNALS.

17. White must be displayed to the front in the headlight of the engine of every train by night, but must be concealed when a train has turned out to meet another and has stopped clear of main track, or is standing to meet trains at the end of double track clear of the single track, or at junctions clear of the other main track; but the white must not be concealed unless the switches are right and secured, and all other trains using the same siding are clear of main track.

17 (a). When the engine of a train is backing up at night and not pushing any cars, a white light must be

displayed on the tender in the direction in which the train is moving.

18. Yard engines must display white to the front in the head-light by night. If provided with a head-light at the rear, white must be displayed in it to the rear by night; in its absence two white lights must be so displayed. Yard engines will not display markers.

19. The following signals must be displayed, one on each side of the rear of every train, as markers, to indicate the rear of the train: By day, a green flag. By night, a green light to the front and side, and a red light to the rear, except when the train turns out to be passed by another and is clear of main track, with switches right and secured, when a white light must be displayed to the front, and a green light to the side and to the rear.

19 (a). A green light to the front and a red light to the rear must be displayed by night on the cupola of the van on trains, except when the train turns out to be passed by another and is clear of main track, with switches right and secured, when a white light must be displayed to the front and a green light to the rear.

20. All sections of a train, except the last, must display two green flags, and, in addition, two green lights by night, in the places provided for that purpose on the front of the engine (on each side of the boiler near its front end), to indicate that there is a section following running under the same schedule and entitled to the same schedule rights (but no more) as the train displaying the green signals. (See rule 218).

21. Extra trains must display two white flags and, in addition, two white lights by night, in the places provided for that purpose on the front of the engine (on each side of the boiler near its front end).

22. When two or more engines are coupled to a train the leading engine only shall, unless otherwise directed,

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give the signals as prescribed by rule 14 and display the signals as prescribed by rules 20 and 21.

23. One flag or light displayed where, in rules 19, 20, and 21, two are prescribed, will indicate the same as two; but the proper display of all train signals is required and both the conductor and engineer are responsible therefor.

24. When cars are pushed by an engine (except when switching or making up trains in yards, but always over public road crossings at grade) a white light must be displayed on the front of the leading car by night.

25. Each car on a passenger train must be connected with the engine by a communicating signal appliance.

26. A blue flag by day and a blue light by night, displayed at one or both ends of a car, engine, or train, indicate that workmen are under or about it. When thus protected, it must not be coupled to or moved. Workmen will display the blue signals, and the same workmen are alone authorized to remove them. Other cars must not be placed on the same track so as to intercept the view of the blue signals, without first notifying the workmen.

#### FIXED SIGNALS.

26 (a). A green light at a switch or the target parallel with the main track, indicates that the switch is set for that track. A red light or the target at right angles to the main track, indicates that the switch is set for some track other than the main track.

26 (b). The normal indication of yard limit signals and of fixed protection signals at railway crossings at grade, junctions, drawbridges, the end of double track, and other points, is "stop;" except when there is no one on duty when it is "proceed." Where a

semaphore is used, a red light, or the arm in a horizontal position, indicates "stop," and a green light or the arm in a diagonal position (at an angle of 60 degrees below the horizontal) indicates "proceed."

For Interlocking Signals—See Interlocking Rules.

" Block " — " Block Signal "  
 " Train Order " — " Rule 221.

#### USE OF SIGNALS.

27. A signal imperfectly displayed, or the absence of a signal at a place where one is usually shown, must be regarded as a stop-signal, and the fact reported to the Superintendent.

27 (a). Firemen must look out for fixed signals, for the train signals prescribed by rules 20 and 21, and for the numbers of engines on trains; and on engines on which it is practicable to do so, announce the indication of fixed signals, the color of the train signals, and the numbers of engines on trains, to engineers, who, having seen them, must repeat to firemen their announcement, if it was correct.

27 (b). A yard limit signal must not be cleared for an approaching train unless the track within the yard limits is clear and the switches are right for it, when the signal must be cleared sufficiently in advance to avoid delay to the train. The signal must be restored to "stop" as soon as the train for which it was cleared has passed it.

28. The combined green and white signal is to be used to stop a train only at the flag stations indicated on the schedule of that train. When it is necessary to stop a train at a point that is not a flag station for that train, a red signal must be used.

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ht or about to move.

grees 31. Signal 14 (*o*) must be sounded at least 80 rods  
( $\frac{1}{4}$  mile) from every public road crossing at grade, and  
the engine-bell be kept ringing until the crossing is  
passed. Signal 14 (*o*) must be sounded at every whistle  
post.

31 (*a*). Signal 14 (*p*) must be sounded one mile from  
stations, watering and fueling points, junctions, the end of  
double track, drawbridges, and railway crossings at grade.

31 (*b*). A train displaying green signals for a following  
section, must sound the signal 14 (*m*) to every train of the  
same or inferior class, and to every train of superior class  
affected by the signals, which it meets or passes, and must  
hear the answer 14 (*h*) from it, or stop and notify it of  
the green signals displayed.

32. The whistle and bell must not be used unneces-  
sarily, especially when passenger trains are nearby.  
They must be used only as prescribed by rule, or to  
prevent accident.

33. Green signals must be used by watchmen stationed  
at public road crossings at grade to prevent persons and  
vehicles from crossing the track when trains are approach-  
ing. Red signals must be used by them only when  
necessary to stop trains.

## CLASSIFICATION OF TRAINS.

81. Trains of the first class are superior to those of the second ; trains of the second class are superior to those of the third ; and so on. Extra trains are inferior to all regular trains.

Regular trains in the superior direction, as specified by the time table, are superior to trains of the same class in the inferior direction.

82. A regular train twelve hours behind its schedule time, thereupon loses its right to track under its schedule, and all train orders issued to it as a regular train thereupon become void.

82 (a). All sections of a train run under the same schedule, and are entitled to the same schedule rights, but no more.

## MOVEMENT OF TRAINS.

83. A train must not leave its initial point on any section or branch, or a junction, or pass from double to single track, until it is ascertained whether all trains due, which are superior to it or are of the same class, have arrived or left.

83 (a). Before a train leaves its initial point on any section or branch, the conductor and engineer must, unless otherwise directed, read and sign for the bulletins posted there.

83 (b). Train registers at the registering points designated on the time-table must, unless otherwise directed, be examined and their trains be registered therein by conductors, or if there be no conductor, by the engineer.

83 (c). A train must not, unless otherwise directed, leave its initial point on any section or branch without a Terminal Clearance (Form 137).

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83 (d). A train must not leave a point at which the yard limit signal in advance indicates "stop."

84. A train leaving its initial point on any section or branch, or leaving a junction, when a train of the same class in the same direction is overdue, will proceed on its own schedule, and the overdue train will run as prescribed by rule 91.

85. A train must not start until the proper signal is given.

86. An inferior train must keep out of the way of a superior train.

87. A train failing to clear the main track by the time required by rule, must be protected as prescribed by rule 99.

88. At meeting points between regular trains of the same class other than meeting points fixed by train order, the train in the inferior direction must clear the main track before the leaving time of the opposing train, and must pull into the siding when practicable. If necessary to back in, the train must first be protected as prescribed by rule 99.

89. At meeting points between trains of different classes other than meeting points fixed by train order, the train of inferior class must clear the main track at least five minutes before the leaving time of the opposing train, and must pull into the siding when practicable. If necessary to back in, the train must first be protected as prescribed by rule 99.

89 (a). At meeting points between trains fixed by Train Order Form A or Form P (1), the train of inferior class, or in the case of trains of the same class, the train in the inferior direction must, unless otherwise directed, take the siding and must pull in when practicable. If necessary to back in, the train must first be protected

as prescribed by rule 99. The opposing train must, unless the train which it is to meet is there, clear of main track with switches right, stop clear of the switch to be used by that train in taking the siding.

90. Trains must stop at schedule meeting or passing points, if the train to be met or passed is of the same class, unless the track is clear and the switches right, and must stop clear of the switch to be used by that train in taking the siding.

When the expected train of the same class is not found at the schedule meeting or passing point, the superior train must, until the expected train is met or passed, approach all sidings prepared to stop.

90 (a). Trains must not pass any meeting point without knowing positively that the train or trains met are those which had right to track over them.

90 (b). An inferior train must keep at least ten minutes off the time of a superior train in the same direction.

91. Unless authorized by train order or block signal rules, a train must not leave a station within ten minutes of the departure therefrom of a train in the same direction, unless a report of its arrival at a station ahead is received, and this interval must be maintained, except in closing up at stations. If the train ahead is a passenger or mixed train, a train must not, unless authorized by train order or block signal rules, or otherwise directed, leave a telegraph office until, if the next station ahead is a telegraph office, a report of the arrival there of the passenger or mixed train is received, unless the telegraph line fails, when the train following, which must be advised of the failure of the telegraph line by the operator noting it on the Clearance, may leave twenty minutes after the departure of the passenger or mixed train. If either the station from which a train is to follow or the next station

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ahead is not a telegraph office, a train must not, unless authorized by train order or block signal rules, or otherwise directed, leave a station following a passenger or mixed train until twenty minutes after its departure therefrom, unless a report of its arrival at a station ahead is received. The train order signal must be used by operators to hold trains to follow as required by this rule.

92. A train must not arrive at a station in advance of its schedule arriving time.

A train must not leave a station in advance of its schedule leaving time.

92 (a). A first class train must not arrive at a station where only the leaving time is shown, more than five minutes in advance of its schedule leaving time.

93. A regular train which is delayed, and falls back on the time of another train of the same class, will proceed on its own schedule.

93 (a). A train unable to keep out of the way of a following train of the same class will allow the following train to pass and each will proceed on its own rights, but a section must not pass another section of the same train without an order from the train dispatcher, except as provided by rule 94 and the exchange of all train orders.

94. A train which, at a point which is not a telegraph office, overtakes a superior train or a train of the same class, so disabled that it cannot proceed, will, if practicable, pass it, if necessary assuming its schedule, taking its train orders, and displaying its signals, and proceed to the first office at which an operator is accessible, where it will report the fact to the train dispatcher. The disabled train will assume the schedule, take the train orders, and display the signals of the last train with which it exchanges, and will, when able, proceed to

and report from the first office at which an operator is accessible.

95. An extra train must not be run without orders from the train dispatcher.

95 (a). A train must not display green signals for a following section without an order from the train dispatcher except as prescribed by rule 94.

96. When green signals displayed for a section are taken down, at any point except the terminal point on any section or branch, before the train for which they are displayed arrives, the conductor must, before the signals are taken down, arrange with the operator, or if there be no operator, with a flagman left there for the purpose, to notify all opposing trains of the same or inferior class and opposing trains of superior class affected by the signals leaving such point, that the train for which the signals were displayed has not arrived. The conductor must obtain an undertaking in writing from the operator or flagman to so notify such trains, which the latter must remain on duty to do unless otherwise directed by an order from the train dispatcher, who will then be responsible for so notifying such trains. The operator must at once inform the train dispatcher that the signals have been taken down.

98. All trains must, unless otherwise directed, approach stations, junctions, the end of double track and watering and fueling points, prepared to stop, unless the track is clear and the switches and signals are right. Extra trains must, unless otherwise directed, approach such points with extra precaution, expecting to find the track occupied.

98 (a). All trains, except first class trains, must, unless otherwise directed, approach and pass through yard limits defined by yard limit boards, cautiously, expecting to

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find the track occupied or the switches wrong, and prepared to stop.

98 (b). An approaching train finding a yard limit signal displayed at "stop," must stop outside of it and sound whistle signal 14 (*p*). The train will, unless otherwise directed, then move ahead cautiously, (preceded by a flagman when, either on account of curvature or weather or other conditions, the track cannot be seen to be clear) expecting to find the track occupied or the switches wrong, and prepared to stop at once, until its rear is inside of the yard limit signal. Should any portion of the train remain outside of the signal, it must be immediately protected as prescribed by rule 99.

98 (c). Unless there is an interlocking plant in operation, trains must stop and receive proceed-signal from signalman before passing over a drawbridge or a railway crossing at grade. The back view of a fixed signal at such a point does not govern the movement of a train.

98 (d). Passenger trains must not exceed a speed of twelve miles and other trains a speed of eight miles per hour over railway crossings at grade and drawbridges.

98 (e). The conductor of every train except passenger trains, must, one mile from every station at which the train is not required to stop, give proceed-signal to the engineer, who must if he does not receive such signal, approach the siding cautiously and stop clear of the switch that an opposing train would use in taking the siding.

98 (f). Brakemen must be out on the top of mixed, freight, and work trains at least one mile from and until one quarter of a mile past stations, yard limits, junctions, the end of double track, watering and fueling points, drawbridges and railway crossings at grade, and also on any

descending or ascending grade or at any other point or time where or when their services are likely to be required.

98 (g). There must be a trainman on the rear platform or on top of the last car of every train, except passenger trains, standing or in motion on an ascending grade, and when passing and leaving a station.

98 (h). Public road crossings must not be blocked longer than five consecutive minutes.

98 (i). Freight cars must not be placed in trains in rear of cars which have passengers in them.

98 (j). Engines of trains must not be changed without permission from the train dispatcher, except in case of emergency when he cannot be communicated with, and then the fact must be reported to him by each train from the first office at which an operator is accessible. In case the engine of a train is changed, the train must stop and so notify every train holding a train order in which it is designated by the number of its former engine.

98 (k). Engines under steam must not be left on the main track, or on any other track with switches set for main track, without an authorized person in charge. Engineers are responsible for the movement of engines from the time they take charge of them until they turn them over to the hostler or put them into the engine house.

98 (l). When it is necessary for a train to stop on the main track elsewhere than at stations, switches, coaling and watering points, it must, if practicable, stop where there is no curve within half of a mile of its rear.

99. When a train stops or is delayed on the main track under circumstances in which it may be overtaken by another train, and is not otherwise sufficiently protected, the flagman must go back immediately a sufficient dis-

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distance from the train to insure full protection, and except as prescribed by rules 99 (a) and 99 (b), at least :

In daytime, if there is no down grade towards train within one mile of its rear, and there is a clear view of its rear of 2,000 yards (40 telegraph poles) from an approaching train.....	} 500 yards, (10 telegraph poles).
At other times and places, if there is no down grade towards train within one mile of its rear.....	} 1200 yards, (24 telegraph poles).
If there is a down grade towards train within one mile of its rear .....	} 1800 yards, (36 telegraph poles).

The flagman must, after going back a sufficient distance from the train to insure full protection, take up a position where there will be an unobstructed view of him from an approaching train of, if possible, 500 yards (10 telegraph poles), first placing two torpedoes (two rails length apart) on the rail on the same side as the engineer of an approaching train, 100 yards (2 telegraph poles) beyond such position. The flagman must remain in such position until recalled or relieved.

If recalled before another train arrives, he must, at night, or when weather or other conditions obscure day signals, or when snow-plows or flangers may be running, in addition to the two torpedoes, leave a fusee burning red at the point he returns from and at such other points on his return as may be necessary to insure full protection.

The front of a train must be protected in the same way, when necessary, by the front brakeman or, if there be none, by the fireman.

Flagmen must always on the approach of a train display stop-signal, and, if not already done, place two

torpedoes on the rail as before described, and then return 100 yards (2 telegraph poles) nearer the protected point.

Flagmen and those acting as flagmen must each be equipped for day time with a red flag and four torpedoes; and for night time and when weather and other conditions obscure day signals, with a red light, four torpedoes, three red fusees, and a supply of matches.

99 (a). Train and yard engines, unless otherwise directed, have the right to work on the main track within yard limits, on the time of all trains except first-class trains, but must, on their approach, clear the track as soon as possible. A train occupying the main track in a yard equipped with yard limit signals, must be protected by such signals against all trains.

99 (b). A train occupying the main track at a watering or fueling point, or between switches at a station, is not required to protect itself as prescribed by rule 99 against extra trains, except those which have been given right to track over it, unless obstructions or curvature, or weather or other conditions prevent a clear view of its rear of 1000 yards (20 telegraph poles) from a following train.

100. When the flagman is protecting the rear of his train, the front brakeman, or if, in the case of passenger trains, there be none, the baggageman, must, unless required to protect the front of the train, take his place on the train.

100 (a). When a train is delayed or approaching a point at which it will stop and should be protected as prescribed by rule 99, the flagman must, as soon as he can do so, drop off to so protect it.

100 (b). A train unable to reach the next station to clear an opposing superior train, must be protected immediately in both directions as prescribed by rule 99.

100 (c) A train to be moved under protection to the next station in either direction, must, unless otherwise sufficiently protected, be preceded by a flagman at least 2,500 yards (50 telegraph poles) in advance, and be followed by a flagman at least 2,000 yards (40 telegraph poles) in rear, and these distances must be maintained.

100 (d). If a defect in the track affecting its safety is discovered by a train passing over it, a flagman must go back immediately, as prescribed by rule 99, to stop and notify following trains.

100 (e). When a rail is to be changed or the main track is otherwise unsafe for trains to pass over, the defective point must, if possible to do so and perform the required work, be protected in both directions as prescribed by rule 99.

If impossible to thus protect the defective point in either direction, and perform the required work, a red flag by day and, in addition, a red light by night or when weather or other conditions obscure day signals, must, in the absence of a flagman, be firmly fixed, clear of passing trains, on the same side of the track as the engineer of an approaching train, and where it will be clearly in his view, 1,200 yards (24 telegraph poles) if no down grade, and, if there is a down grade within one mile 1,800 yards (36 telegraph poles) from the defective point, or as much further as may be necessary to insure full protection, with two torpedoes placed on the rails opposite each other so as to make one explosion, 100 yards beyond the red flag. When this has been done, the flagman may return to assist in the work. A train so stopped must sound signal 14 (*n*), be immediately protected in rear as prescribed by rule 99, and must not proceed until it is known that the track is safe for it to do so.



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flagman. The detached portion must not be moved or  
 passed until the front portion comes back. Before  
 backing the front portion, the draft rigging of the rear car  
 must be known to be in safe condition. If the front por-  
 tion reaches a station, and also in the case of a train  
 doubling to a station, the engineer must, before going  
 back for the rear portion, obtain an undertaking in writ-  
 ing from the operator, if there be one on duty there, to  
 stop any opposing trains.

102. When cars are pushed by an engine (except when  
 switching and making up trains in yards, but always  
 over public road crossings at grade) a flagman must take  
 a conspicuous position on the front of the leading car,  
 to warn persons on the track and signal the engineer  
 in case of need.

103. Messages or orders respecting the movement of  
 trains or the condition of track or bridges, must be in  
 writing.

103 (a). Delays to trains, fire on or near the Company's  
 premises which does not affect the safety of the track,  
 fences or telegraph line down, and live stock on the line,  
 must be reported to the train dispatcher from the first  
 telegraph office at which the train stops, and defect in  
 track or anything affecting its safety from the first  
 office at which an operator is accessible.

104. Switches must be left in proper position and  
 main track switches locked and other switches secured  
 after having been used. Conductors are responsible for  
 the position of the switches used by them and their  
 trainmen, except where switchmen are stationed.

A switch must not be left open for another train unless  
 in charge of a trainman of such train or of a switch-  
 man.

Those operating switches must stand on the opposite side of track from switch stand while trains are passing switches.

Engineers must see that switches at the front end of their trains are set right.

105. Both conductors and engineers are responsible for the safety of their trains, and, under conditions not provided for by the rules, must take every precaution for their protection.

105 (a). During foggy, smoky, or stormy weather extra precautions must be taken for the protection and safe movement of trains.

106. In all cases of doubt or uncertainty the safe course must be taken, and no risks run.



## RULES FOR MOVEMENT BY TRAIN ORDERS.

201. For movements not provided for by the timetable, train orders will be issued by the authority and over the signature of the designated train dispatchers. They must contain neither information nor instructions not essential to such movements.

They must be brief and clear; in the prescribed forms when applicable; and without erasure, alteration, or interlineation.

201 (a). The different forms of train orders may be combined in one order, provided there is no movement in such a combination order which does not directly affect the train first named in the order. (See examples of combination orders).

202. Each train order must be given in the same words to all trains and persons addressed.

203. Train orders must be numbered consecutively each day, beginning with No. 1 at midnight.

204. Train orders must be addressed to the trains and persons who are to execute or observe them, and the place at which each is to receive them must be named. An order addressed to a train must be regarded as addressed to the conductor, and to each engineer, if there be more than one, and to the pilot if there be one; and each must receive a copy, except that in the case of a train without a conductor it must be regarded as addressed to the engineer and fireman, or to each engineer, if there be more than one, and to the pilot if there be one, and each must receive a copy.

205. Each train order must be written (in ink) in full in a book provided for the purpose at the office of the train dispatcher, and with it recorded the names of those who have signed for the order, and the time and the signals

which show when and from what offices the order was repeated, and the responses transmitted. These records must be made at once, and never from memory or memoranda.

205 (a). When a train dispatcher is relieved, he must set forth in writing (in ink), in a book provided for the purpose, all necessary information for the relieving train dispatcher, specifying incomplete train orders; and must therein obtain his receipt (in ink) therefor.

205 (b). When an operator or other employee is relieved, he must transfer all incomplete and undelivered train orders to the party relieving him; obtain his signature thereon; and, in a book provided for the purpose, take his receipt (in ink) therefor.

205 (c). When conductors or engineers change off, they must transfer all train and other orders affecting their trains; and each must know that the orders he transfers are correctly understood by the other, and obtain his written receipt therefor. Conductors and engineers, after changing off, must compare their orders.

206. Regular trains must be designated in train orders (except in order Form K, in which the number of the train annulled must be given in words followed by the figures) by their numbers, followed by their engine numbers, if known, as "No 39 eng 207" or "2d No 10 eng 551" except that the engine numbers will not be used in the addresses of orders, in order Form K, or in Clearance Orders (Form 137 and 137 A). If the number of the engine of a regular train cannot be ascertained, the word "unknown" must be used instead of the number, as "3d No 6 eng unknown."

Extra trains must be designated in orders by their direction, when necessary and it is not otherwise indicated, followed by their description, and engine numbers, as "Up psgr extra 614."

Extra trains must be described as:

Extra—for freight train extra.

Passenger extra—for passenger train extra.

Mixed extra—for combined passenger and freight train extra.

Work extra—for work train extra.

Plow extra—for an extra train with a snow plow working.

Engine extra—for one or more engines coupled without cars, running as an extra train.

To indicate the direction of extra trains, "up" must be used for west and north bound, and "down" for east and south bound trains.

When there are two or more engines on a train, the number of the leading engine, which will go through with the train over the section or branch, must be used to designate the train.

206 (a). Time and numbers, except numbers of regular trains (except in train order Form K) and of engines and of the day of the month when the day of the week is given, must be given in words followed by the figures, in train orders.

207. Before transmitting a train order, the signal "31" or the signal "19" must be given to each office addressed, the number of copies being stated, if more or less than three, thus—"31 copy 5," or "19 copy 2."

208. A train order to be sent to two or more offices, must be transmitted simultaneously to as many of them as practicable. The several addresses must be in the order of superiority of trains, each office taking its proper address. When not sent simultaneously to all, the order must be sent first to the superior train.

209. Operators receiving train orders must write them in manifold during transmission, and if they cannot at

one writing make the requisite number of copies, must trace others from one of the copies first made.

210. When a "31" train order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy in the succession in which the several offices have been addressed, each giving his office signal and writing the time of repetition on the order. Each operator receiving the order should observe whether the others repeat correctly.

Each of those to whom the order is addressed, except engineers, firemen, and pilots, must read it aloud to the operator and then sign it; and the operator will send their signatures preceded by the number of the order to the train dispatcher. The response "complete," the time, and his initials, will then be given by the train dispatcher. Each operator receiving this response will then write on each copy the word "complete," the time, and his last name in full; and then deliver a copy for each person addressed to the conductor. The copy for each person on his train addressed must be delivered to him personally by the conductor, and he must read it to the conductor, who will compare with his own copy, which must then be signed by each such person. The engineer of the leading engine on a train without a conductor must receive and deliver orders as by this rule required of a conductor.

211. When a "19" train order has been transmitted, operators must (unless otherwise directed) repeat it at once from the manifold copy, in the succession in which the several offices have been addressed, each giving his office signal. Each operator receiving the order should observe whether the others repeat correctly. When the order has been repeated correctly by an operator, the response "complete," the time, and his initials, will be

given by the train dispatcher. Each operator receiving this response will then write on each copy the word "complete," the time, and his last name in full; and personally deliver a copy to each person addressed, without taking his signature.

The "19" form of train order must not be used to restrict the superiority of a train.

212. A train order may, when so directed by the train dispatcher, by sending "X" after transmitting the order, be acknowledged without repeating, by the operator responding: "X; (No. of Train Order) to (Train)," with his last name and office signal. The operator must then write on the order his initials and the time, but not "complete" until after he has repeated the order to the train dispatcher and received "complete" from him.

213. "Complete" must not be given to a train order for delivery to an inferior train until the order has been repeated or the "X" response sent by the operator who receives the order for the superior train.

214. When an order has been entirely repeated or "X" response sent, and before "complete" has been given, the order must be treated as a holding order for the train or trains addressed or named in the order; but must not be otherwise acted on until "complete" has been given.

If the line fails before an office has repeated an order or has sent the "X" response, the order at that office is of no effect, and must be there treated as if it had not been sent.

214 (a). Engineers must read their train orders to their firemen, and conductors to their rear brakemen.

215. The operator who receives and delivers a train order must preserve the lowest copy.

216. For train orders delivered by the train dispatcher, the requirements as to the record and delivery are the

same as at other points. The lowest manifold copy must appear in the record book.

217. A train order to be delivered to a train at a point which is not a telegraph office, must be addressed to the train (at)——*care of*——and forwarded and delivered by the conductor or other person in whose care it is addressed. When a "31" order is used, "complete" will be given upon the signature of the person by whom the order is to be delivered, who must be supplied with copies for each of those addressed, and a copy upon which he shall take their signatures. This copy he must deliver to the first operator accessible, who must preserve it, and at once transmit the conductor's signature to the train dispatcher.

Orders so delivered must be acted on as if "complete" had been given in the usual way.

For an order which is sent, in the manner herein provided, to a train, the superiority of which is thereby restricted, "complete" must not be given to an inferior train until the signature of the conductor of the superior train has been sent to the train dispatcher.

218. When a train is named in a train order, all its sections are included unless particular sections are specified, and each section included must have copies addressed and delivered to it.

Particular sections must be specified when it is known a train is, or is to be, in sections.

218 (a). A meeting order must not be sent for delivery to a train at the meeting point if it can reasonably be avoided; when it cannot be avoided, "This order to . . . . . at the meeting point" must be added to the order, except when it is sent for delivery to a train at the initial point of a section or branch.

218 (b). Train orders should not be sent an unnecessarily long time before delivery, or to points unneces-

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sarily distant from where they are to be executed. No orders (except those affecting the train at that point) should be delivered to a train at a point where it has much work until after the work has been done.

219. Unless otherwise directed, an operator must not repeat a train order or give the "X" response to an order for a train, the engine of which has passed his train order signal, until he has ascertained that the conductor and engineer have been notified that he has orders for them.

220. Train orders once in effect, continue so until fulfilled, superseded, or annulled, or until, in the case of orders held by or concerning a regular train, they become void by such train being annulled or losing its right to track, as prescribed by rules 4 (b) and 82.

Any part of an order specifying a particular movement may be either superseded or annulled.

221. A fixed signal, known as a "train order signal," the normal indication of which is "proceed," must be used at each train order office. It must indicate "stop" when trains are to be stopped for train orders, for meeting or passing, or as required by rule 91.

When an operator receives the signal "31" or "19," he must immediately display the train order signal at "stop," and then reply "stop displayed;" and until the orders have been delivered or annulled, the signal must not be restored to "proceed" except to allow a train to pass for which there are no orders, and which will not otherwise stop, and then only on an order Form J (b), when the operator must clear the signal sufficiently in advance of the train named in the order to avoid delay to it, and hold the signal (not fasten it) at "proceed" until he has seen the markers and they have passed the signal 300 feet, when he must restore it to "stop."

A train stopped by a train order signal must not proceed until a Clearance (Form 137 or 137A) is received.

A train, the engine of which passes a train order signal indicating "stop," must not afterwards proceed without a Clearance (Form 137 or 137A).

A train which has stopped at a train order office, must not, although not stopped by the train order signal, afterwards proceed if the train order signal there then indicates "stop" unless it has a Clearance (Form 137 or 137A).

Operators must, before clearing the train order signal for an approaching train as directed by order Form J (b), know that it is not a train for which they hold orders.

Operators must have the proper appliances (a red and a green flag by day, and a red and a green light by night) for hand signalling ready for immediate use in case the train order signal should fail to work properly.

If a light is not displayed in the train order signal at a night telegraph office, trains which have not been notified must stop and ascertain the cause, and report the facts to the train dispatcher from the next open telegraph office.

Where a train order signal of the semaphore type is used, a red light or the arm in a horizontal position, indicates "stop," and a green light or the arm in a diagonal position (at an angle of 60 degrees below the horizontal), indicates "proceed."

Where a train order signal of the target type is used, a red light or the target at right angles to the main track, indicates "stop," and a green light or the target parallel with the main track, indicates "proceed."

222. Operators must promptly report to the train dispatcher, the arrival and departure time of all trains, stating the direction of extra trains.

222 (a). At points at which trains are not required to register, they must be registered on the prescribed form by the operator.



223. The following signals and abbreviations may be used :

Initials for signature of the train dispatcher.

Such office and other signals as are arranged by the Superintendent.

C & E. — Conductor and Engineer.

Dispr. — Train Dispatcher.

Opr. — Operator.

Psgr. — Passenger.

Fr. — Freight.

Eng. — Engine.

Sec. — Section.

Jct. — Junction.

Mins. — Minutes.

No. — Number.

Com. — Complete.

X. — Train will be held until order is made "complete."

S D — Train order signal is displayed at "Stop."

C Y — Copy.

C S — Car Report.

D S — Report of an east or south bound train.

U S — Report of a west or north bound train.

T S — Standard Time.

W S — Weather Report.

9 — Operators to ask for Train Orders.

17 — A message of great importance which must be sent immediately.

19 or 31 — To clear the line for Train Orders.

23 — A message for all.

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## FORMS OF TRAIN ORDERS.

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### Form A.—Fixing Meeting Points for Opposing Trains.

- (1). ——— will meet ——— at ———.  
 (2). ——— will meet ——— at ——— (and) ———  
 at ——— (and so on).

#### EXAMPLES.

- (1). *No 1 eng 90 will meet No 2 eng 85 at Bombay.*  
 (2). *No 1 eng 90 will meet No 2 eng 85 at Bombay 2d  
 No 4 eng 66 at Siam and work extra 95 at Hong Kong.*

Trains receiving these orders will run with respect to each other to the designated points, and there meet in the manner prescribed by the rules.

When practicable without delay to trains, train dispatchers will address this order to the operator at the meeting point, preceded by the signal "19." When the operator has entirely repeated the order, he must hold the trains to meet.

### Form B.—Directing a Train to Pass or Run Ahead of Another Train.

- (1). ——— will pass ——— at ———.  
 (2). ——— will pass ——— when overtaken.  
 (3). ——— will run ahead of ——— ——— to ———.

#### EXAMPLES.

- (1). *No 1 eng 90 will pass No 3 eng 79 at Khartoum.*  
 (2). *No 6 eng 56 will pass No 4 eng 123 when overtaken.*  
 (3). *Extra 594 will run ahead of No 6 eng 56 Bengal to Madras.*

A train receiving an order to pass or run ahead of another train is not required to keep clear of the time of

such other train, but must keep a sharp look out for it, and must be immediately protected as prescribed by the rules whenever it is liable to be overtaken by it.

A train passing or running ahead of another train on Form B must, if it is unable to keep out of its way, allow it to pass.

A train receiving an order that another train will pass it or run ahead of it, must not exceed the speed of the other train between the points designated, and must keep a sharp look out for it.

When, under (1), a train is to pass another, both trains will run according to rule to the designated point, and there arrange for the rear train to pass promptly.

Under (2), both trains will run according to rule until the second named train is overtaken, when it must allow the first named train to pass.

### Form C.—Giving a Train the Right to Track Over an Opposing Train.

—— has right over —— —— to ——

#### EXAMPLES.

(1). *No 1 eng 90 has right over No 2 eng 85 Mecca to Mirbat.*

(2). *Extra 37 has right over No 3 eng 79 Natal to Ratlam.*

This order gives the first-named train the right to track over the other train between the points named.

If the trains meet at either of the designated points, the first-named train must take the siding, unless the order otherwise prescribes.

Under (1), if the second-named train reaches the point last named before the other arrives, it may proceed, keeping clear of the schedule of the opposing train as many minutes as such train was before required to clear it under the rules.

If the second-named train, before meeting, reaches a point within the limits named in the order, the conductor must stop the other train where it is met and inform it of his arrival.

If the first-named train, before meeting, reaches a point beyond the limits named in the order, the conductor must stop the other train where it is met and inform it of his arrival.

Under (2), the regular train must not go beyond the point last named until the extra train has arrived.

When the extra train has reached the point last named, the order is fulfilled.

#### **Form D.—Giving Regular Trains the Right to Track Over a Designated Train.**

Regular trains have right over —— between —— and ——.

##### EXAMPLE.

*Regular trains have right over No 1 eng 90 between Moscow and Berlin.*

This order gives to regular trains receiving it the right to track over the train named in the order, and the latter must clear the schedule times of all regular trains, as if it were an extra.

#### **Form D (a)—Line Clear Order.**

Line clear to —— for ——.

##### EXAMPLES.

*Line clear to Stockholm for eng extra 97.*

*Line clear to Berlin for No 3 eng 96.*

This order gives the train named the right to track over all trains from the point at which the order is received to the point named, but it must be protected as prescribed by rule 99 and must follow trains as prescribed

by rule 91. A copy must be addressed to the operator at the point to which the line is clear, and he must repeat it, and then hold all trains in the opposite direction until the train named has arrived. "Complete" must not be given to the order for the train until "complete" has been given to the order for the operator at the point to which the line is clear. This form of order must not be used unless authorized by the Superintendent.

#### Form E.—Time Orders.

- (1). ——— will run ——— late ——— to ———.
- (2). ——— will run ——— late ——— to ——— and  
——— late ——— to ——— etc.
- (3). ——— will wait at ——— until ——— for ———.

#### EXAMPLES.

(1). *No 1 eng 90 will run twenty (20) mins late Joppa to Mainz.*

(2). *No 1 eng 90 will run twenty (20) mins late Joppa to Mainz and fifteen (15) mins late Mainz to Muscat, etc.*

(3). *No 1 eng 90 will wait at Muscat until ten (10) a.m. for psgr extra 439.*

(1) and (2) make the schedule time of the train named, between the points mentioned, as much later as stated in the order; and any other train receiving the order is required to run with respect to this later time, as before required to run with respect to the schedule time of the train named. The time in the order should be such as can be easily added to the schedule time.

Under (3), the train first named must not pass the designated point before the time given, unless the other train has arrived. The train last named is required to run with respect to the time specified, as before required to run with respect to the regular schedule time of the train first named.

## Form F.—For Sections.

- (1). Engs \_\_\_\_\_ and \_\_\_\_\_ will run as \_\_\_\_\_ and \_\_\_\_\_ to \_\_\_\_\_.
- (2). \_\_\_\_\_ will run as \_\_\_\_\_ and display green for eng \_\_\_\_\_ to \_\_\_\_\_.
- (3). \_\_\_\_\_ will display green \_\_\_\_\_ to \_\_\_\_\_ for eng \_\_\_\_\_.
- (4). \_\_\_\_\_ will run as \_\_\_\_\_ and display green \_\_\_\_\_ to \_\_\_\_\_.
- (5). \_\_\_\_\_ will run as \_\_\_\_\_ \_\_\_\_\_ to \_\_\_\_\_.

## EXAMPLES.

(1). *Engs 70, 85 and 90 will run as 1st, 2nd and 3rd No 1 London to Paris.*

(2). *Eng 67 will run as 2nd No 1 and display green for eng 45 Dover to Paris.*

(3). *2nd No 1 eng 96 will display green Berlin to Antwerp for eng 85.*

(4). *Eng 20 will run as 1st No 1 and display green London to Dover.*

(5). *Eng 76 will run as 3rd No 1 London to Dover.*

Under (1) the first-named engine will run as the first section, the second-named engine as the second section and so on; and the engine last named will not display green signals.

Under (2) and (3) the last-named engine will run as the next section between the points named, but will not display green signals.

(4) will be used when the number of the engine of the section to follow is not known. The section to follow will be given a separate order as per forms (1), (2) or (4), unless it is the last section when it will be given an order as per form (5).

In a combination train order made of Form F and any other form of order, the section or sections concerned in each movement, must be clearly specified. See combination orders Nos. 8 and 9.

Form for annulling a section.

(6). — is annulled as — from —.

EXAMPLE.

(6). *Eng 85 is annulled as 2d No one (1) from Chatham.*

If there are other sections following, add :

*Following sections will change numbers accordingly.*

Each section affected by the order must have copies, and must arrange signals accordingly.

Form G.—Extra Trains.

(1). Eng — will run — extra — to —

(2). Eng — will run — extra — to —,  
and return to —.

EXAMPLES.

(1). *Eng 99 will run extra Berber to Gaza.*

(2). *Eng 99 will run plow extra Berber to Gaza and return to Cabul.*

A train receiving this order is not required to protect itself against opposing extra trains unless directed by order to do so, but must keep clear of all regular trains, as required by rule.

When a train is to receive this order at the point from which it will run extra, and the order is addressed to it only, the engine number and the name of such point may be omitted from the body of the order.

(3) Eng ——— will run ——— extra leaving ——— on  
 ——— as follows with right over all trains (except ———)

Leave ———.

“ ———.

Arrive ———.

EXAMPLE.

(3). *Eng 77 will run psgr extra leaving Turin on Thursday Feb 17th as follows with right over all trains (except No 1 eng 90).*

*Leave Turin eleven thirty (11.30) p.m.*

“ *Pekin twelve twenty-five (12.25) a.m.*

“ *Canton one forty-seven (1.47) a.m.*

*Arrive Rome two twenty-two (2.22) a.m.*

This order may be varied by specifying the particular trains over which the extra train shall or shall not have the right to track. The extra train running on this schedule will be governed by rule 92. Trains over which the extra train is thus given the right to track, must clear the time of the extra train five minutes in the case of opposing trains and ten minutes in the case of trains in the same direction.

The right to track given any extra train by this order, continues until fulfilled, superseded, or annulled.

(4). ——— will run ——— late ——— to ——— on  
 schedule in train order ———.

EXAMPLE.

(4) *Extra 430 will run forty (40) mins late Joppa to Mainz on schedule in train order 56.*

This order makes the time of the train named as much later as stated in the order; and any other train receiving the order is required to run with respect to this later time, as before required to run with respect to the time of the extra train as given in the train order named.



The time in the order should be such as can be easily added to the time of the extra train as given in the train order named.

### Form H.—Work Extras.

(1). Eng \_\_\_\_\_ will work extra \_\_\_\_\_ until \_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_.

#### EXAMPLE.

(1). *Eng 292 will work extra seven (7) a.m. until six (6) p.m. between Berne and Turin.*

A train receiving this order is not required to protect itself against extra trains unless directed by order to do so, but must keep clear of all regular trains, as required by rule.

A copy must also be addressed to the operator at each of the points named, if it is a telegraph office; if not, at the next nearest telegraph office outside that end of the working limits; and he must give copies to every extra train running towards the working limits, and arriving at his station before the time named has expired, taking the conductor's signature on his own copy. "Complete" must not be given to the order for the work extra until "complete" has been given to the orders for both the operators.

An extra train receiving a copy of the order, must not enter within the working limits until the time named has expired, unless it receives an order providing for it to protect against, meet, or pass the work extra, in which order the direction of the extra train must be stated; or unless it meets or passes the work extra at the end of the working limits, and the track is safe for it to proceed.

The work extra must be clear of main track, or protected as prescribed by rule 99, five minutes before the time named has expired.

The working limits should be as short as practicable, to be changed as the progress of the work may require.

When it is anticipated that a work extra may be where it cannot be reached for orders, it may be directed to report for orders at a given time and place, but this will not affect its right to track.

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An order may be given to a work extra that it shall clear the main track for, or protect itself after a certain hour against, a designated extra train, in the following form :

(2). Work extra ——— will keep clear of (or protect against) ——— extra ——— between ——— and ——— after ——— .m.

EXAMPLE.

(2). *Work extra 87 will keep clear of (or protect against) down extra 223 between Antwerp and Brussels after two-nought-five (2.05) p.m.*

The other extra train must not pass within the limits named before the hour specified, five minutes before which time the work extra must be clear of main track, or protected as prescribed by rule 99 (as the order may require).

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When the movement of an extra train over the working limits cannot be anticipated by an order to the work extra, an order must be given to such extra train to protect itself (as prescribed by rule 99) against the work extra, in the following form :

(3). Extra ——— will protect against work extra ——— between ——— and ———.

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## EXAMPLE.

(3). *Extra 76 will protect against work extra 95 between Lyons and Paris.*

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When it is desired that a work extra shall at all times protect itself while on working limits, it shall be done by adding the following words :

(4). "*Protecting itself.*"

A work extra receiving this order must, whether standing or moving, protect itself within the working limits in both directions in the manner prescribed by rule 99.

---

To enable a work extra to work upon the time of a regular train, the following form must be used :

(5). Work extra \_\_\_\_\_ will protect against \_\_\_\_\_ between \_\_\_\_\_ and \_\_\_\_\_.

## EXAMPLE.

(5). *Work extra 292 will protect against No 55 eng 317 between Berne and Turin.*

A work extra receiving this order may work upon the time of the regular train, protecting itself against it as prescribed by rule 99.

A regular train receiving this order, must run expecting to find the work extra protecting itself within the limits named.

---

To give a work extra the right to track over all trains, the following form must be used :

(6). Work extra \_\_\_\_\_ has right over all trains between \_\_\_\_\_ and \_\_\_\_\_ from \_\_\_\_\_m. until \_\_\_\_\_m.

## EXAMPLE.

(6). *Work extra 275 has right over all trains between Stockholm and Edinburgh from seven (7) p.m. until twelve (12) midnight.*

Under (6), the work extra has the right to track over all trains between the points designated from the first time named until five minutes before the second time named—when it must be clear of main track, or protected as prescribed by rule 99.

A copy must also be addressed to the operator at each of the points named, if it is a telegraph office; if not, at the next nearest telegraph office outside that end of the working limits; and he must give copies to every train running towards the working limits and arriving at his station before the time named has expired. "Complete" must not be given to the order for the work extra until "complete" has been given to the orders for both the operators.

A train receiving a copy of the order, must not enter within the working limits until the time named has expired, unless it receives an order providing for it to meet or pass the work extra, in which order the direction of the train must be stated.

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A work extra when met or overtaken by another train, must take the siding, unless otherwise arranged, and allow it to pass.

Working limits must be assigned to work extras.

### Form J.—Holding Order.

- (1). Hold \_\_\_\_\_
- (2). \_\_\_\_\_ will hold at \_\_\_\_\_.

#### EXAMPLES.

- (1). *Hold down extra 413.  
Hold all westbound trains.*

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- (2). *No 2 eng 85 will hold at Berlin.*  
*All eastbound trains will hold at Berlin.*

(1) will be addressed to the operator at the point at which the train or trains are to be held and he will furnish each train, thereby directed to be held, with copies, taking the conductor's signature on his own copy. Trains receiving copies must respect the order as if addressed to them, and must not proceed until copies of an order superseding or annulling it, or of an order in the form, "—— may go from ——" (Example, "*No 2 may go from Paris*"), are received. The direction of an extra train must always be stated.

(2) will be addressed to the train which is to hold and it must not proceed from the point named until the order is superseded or annulled or an order in the form, "—— may go from ——" (Example, "*No 33 may go from Berlin*"), is received.

Form J will only be used when necessary to hold trains until orders can be given, or in case of emergency.

#### Form J (a).—Specifying the speed of a train.

- (1). Do not exceed —— miles per hour —— to ——.
- (2). Run —— miles per hour.
- (3). Run as fast as consistent with safety.

#### EXAMPLES.

(1). *Do not exceed ten (10) miles per hour Berlin to Potsdam.*

(2). *Run forty (40) miles per hour.*

(3). *Run as fast as consistent with safety.*

Under (2), the train addressed will not run at the speed specified unless safe to do so.

**Form J. (b)—Directing an Operator to Clear his Train Order Signal for a Train for which he has no Orders and which will not otherwise stop.**

Clear signal for \_\_\_\_\_ which left \_\_\_\_\_ at \_\_\_\_\_.

EXAMPLE.

*Clear signal for extra 341 which left Dublin at eight-ten (8.10) a.m.*

The time at which the train left the previous telegraph office must be given, except in the case of a regular train on time, when the order may be given in the following form: "*Clear signal for No 1 eng 90 on time.*"

This order must not be given if there is a train in the same direction between the train named and the point at which the signal is to be cleared.

**Form K.—Annulling a Regular Train.**

- (1). \_\_\_\_\_ of \_\_\_\_\_ is annulled \_\_\_\_\_ to \_\_\_\_\_  
 (2). \_\_\_\_\_ due to leave \_\_\_\_\_ is annulled \_\_\_\_\_ to \_\_\_\_\_

EXAMPLES.

(1). *No one (1) of Thursday Feb 25th is annulled Alaska to Halifax.*

(2). *No three (3) due to leave Naples Saturday February 29th is annulled Alaska to Halifax.*

The train annulled loses its right to track under both its train orders and schedule between the points named, and must not be restored under its original number between those points.

**Form L.—Annulling an Order or a Part of an Order.**

- (1). Order No \_\_\_\_\_ is annulled.  
 (2). That part of Order No \_\_\_\_\_ reading \_\_\_\_\_ is annulled.

## EXAMPLES.

(1). *Order No ten (10) is annulled.*

(2). *That part of Order No fourteen (14) reading No 1 eng 90 will meet No 2 eng 85 at Sparta is annulled.*

If an order which is to be annulled has not been signed for by the conductor or delivered to a train, the annulling order will be addressed to the operator, who will, after writing "annulled" on them, destroy all copies of the order annulled but his own, and write on that :

*Annulled by Order No ———.*

An order which has been annulled must not be reissued under its original number.

In the address of an annulling order, the train first named must be that to which right to track was given by the order or the part of the order to be annulled; and when the annulling order is not transmitted simultaneously to all concerned, it must be first sent to the point at which that train is to receive it, and the required response made, before the order is sent for other trains.

**Form P.—Superseding an Order or a Part of an Order.**

This order will be given by adding to prescribed forms the words, "instead of ———."

(1). ——— will meet ——— at ——— instead of ———.

(2). ——— will pass ——— at ——— instead of ———.

(3). ——— will hold at ——— instead of ———.

## EXAMPLES.

(1). *No 1 eng 90 will meet No 2 eng 85 at Hong Kong instead of Bombay.*

(2). *No 1 eng 90 will pass No 3 eng 85 at Medina instead of Mirbat.*

(3). *No 2 eng 85 will hold at Lisbon instead of Madrid.*

An order which has been superseded must not be reissued under its original number.

### Some Examples of Combination Orders.

(1). No 3 eng 79 will meet extra 209 at Madrid and wait at Lisbon until one forty-five (1.45) a.m. for No 48.

(2). No 1 eng 90 will meet No 2 eng 85 at Brussels has right over No 4 eng 57 Bombay to Siam and will run forty (40) mins late Joppa to Mainz.

(3). Eng 99 will run extra Berber to Gaza meet extra 264 at Turin and No 12 eng 163 at Berne and hold at London.

(4). Eng 371 will run psgr extra London to Moscow fifty (50) miles per hour meet No 18 eng 71 and pass No 15 eng 42 at Dover and run ahead of No 7 eng 119 Paris to Berlin.

(5). Eng 292 will work extra seven (7) a.m. until six (6) p.m. between Berne and Turin protect against No 55 eng 219 report at Paris at four thirty (4.30) p.m. and may go from Berne.

(6). Eng 616 will work extra two (2) p.m. until five (5) p.m. between Rome and Florence and keep clear of up eng extra 321 after three thirty (3.30) p.m. and protect against down extra 696 after four (4) p.m.

(7). No 2 eng 85 will meet No 3 eng 79 at Naples and hold at Halifax instead of London. Trains must not exceed six (6) miles per hour between mile post four thirty-six (436) and one-quarter mile east.

(8). Eng 90 will run<sup>2</sup> as 1st No 1 and display green Paris to Rome for eng 107. 1st No 1 eng 90 (or 1st No 1 eng 90 and 2d No 1 eng 107) will meet No 2 eng 85 at Paris and hold at Dresden.

(9). Engs 70, 55 and 83 will run as 1st 2d and 3d No 1 Dublin to Dresden. 1st No 1 will run fifty (50) mins late London to Paris and thirty (30) mins late Paris to Dresden and hold at Dresden.



FORM 137

# CANADIAN PACIFIC RAILWAY COMPANY.

## TERMINAL CLEARANCE.

Dover station 9.15 a. m. March 25 19 01.

I have order<sup>s</sup> No. 8 16 and 19. for No. 9.

Train Order Signal displayed is for Extra 452, and does not affect you.

All trains having right to track over you, and all trains of the same class due to arrive and leave, have arrived and left, except No. 6.

The next train ahead is Ex 691. It left this station at 8.35 a. m. and arrived at Paris at not yet m.

This Clearance does not interfere with or countermand any orders received by you.

W. A. Jones, Operator.

Every person addressed [see rule 204] must have a copy, and see that the train is correctly designated.

The numbers of orders for the train must be filled in in figures. When there are no orders, the word "nil" must be written in.

If the next train ahead has not reached the next telegraph office, the words "not yet" must be written in the blank space provided for the time of arrival at the next telegraph office.

If the train order signal is not displayed at "stop," the word "nil" must be written in.

If all trains having right to track, and all trains of the same class due to arrive or leave, have arrived or left respectively, the word "nil" must be written in.

The other blank spaces are to be filled in as indicated by small type.

Operators must keep the lowest copy.

Green paper will be used for Terminal Clearances.

FORM 137 A

# CANADIAN PACIFIC RAILWAY COMPANY.

## CLEARANCE.

..... Dover station..... 9.15 a. .... m. .... March 25, ..... 19 01.

I have order..... No. .... Nil ..... for No. 12. ....

Train Order Signal displayed is for..... Extra 452 ....., and does not affect you.

The next train ahead is..... Extra 691. .... It left this station at..... 8.35 a. .... m.,  
and arrived at..... Paris ..... at..... not yet ..... m

This Clearance does not interfere with or countermand any orders received  
by you.

..... W. A. Jones, ..... Operator.

Every person addressed [see rule 204] must have a copy, and see that the train  
is correctly designated.

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The numbers of orders for the train must be filled in in figures. When there are no orders, the word "nil" must be written in.

If the next train ahead has not reached the next telegraph office, the words "not yet" must be written in the blank space provided for the time of arrival at the next telegraph office.

If the train order signal is not displayed at "stop," the word "nil" must be written in.

The other blank spaces are to be filled in as indicated by small type.

Operators must keep the lowest copy.

Green paper will be used for Clearances.

## Standard Train Order Blank for "31" Order.

FORM <b>31</b>		FORM <b>31</b>		
<b>CANADIAN PACIFIC RAILWAY COMPANY.</b>				
TRAIN ORDER No. <u>10.</u>				
March 27, 1901.				
To ..... No. 45 .....	At ..... Calais .....			
To .....	Station.			
To .....				
X ..... Robinson .....	Opr. ....	1 45 A. M.		
No 45 Eng 209 will meet extra 217 at Brussels.				
..... G. R. W. Train Despatcher.				
Every person addressed (see Rule 204) must have a copy.				
<i>Repeated at 2.20 A. M.</i>				
Conductor.	Train.	Made.	Time.	Operator.
Jones.	45	Com.	2.20 a. m.	Robinson.

White paper will be used for "31" orders.

The blanks are to be filled in as indicated by small type

The other blank spaces are to be filled in as indicated by small type. Operators must keep the lowest copy. Green paper will be used for Clearances.

## Standard Train Order Blank for "19" Order.

FORM 19	FORM 19
<b>CANADIAN PACIFIC RAILWAY COMPANY.</b>	
TRAIN ORDER No. .... <sup>10</sup> .....	
March 27, 1901.	
To ..... Extra 217	At ..... Copenhagen
To .....	<i>Station</i>
To .....	
X ..... J. A. S. .... <i>Opr</i>	..... 1.40 A. M.
No 45 Eng 209 will meet extra 217 at Brussels.	
..... G. R. W. Train Dispatcher.	
Every person addressed (see Rule 204) must have a copy.	
<i>Made Com. time 2.03 A. M.</i>	Smith <i>Opr.</i>

Pink paper will be used for "19" orders.  
The blanks are to be filled in as indicated by small type.

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## INTERLOCKING.

### DEFINITIONS.

**INTERLOCKING.**—An arrangement of switch, lock, and signal appliances, so interconnected that their movements must succeed each other in a pre-determined order.

**INTERLOCKING PLANT.**—An assemblage of switch, lock, and signal appliances, interlocked.

**INTERLOCKING STATION.**—A place from which an interlocking plant is operated.

**INTERLOCKING SIGNALS.**—The fixed signals of an interlocking plant.

**HOME SIGNAL.**—A fixed signal at the point at which trains are required to stop when the route is not clear.

**DISTANT SIGNAL.**—A fixed signal used in connection with a home signal, to regulate the approach thereto.

**DWARF SIGNAL.**—A low fixed signal.

**SIGNAL MAST.**—The upright to which the signals are directly attached.

### SIGNALS.

#### 601. HOME SIGNALS.

SIGNAL.	OCCASION FOR USE.	INDICATION.	NAME.
COLOR.	The signal will be displayed when	For enginemen and trainmen	As used in rules.
Horizontal Arm or } Red Light..... }	Route is not clear.	Stop.	Stop signal.
* Diagonal Arm or } Green Light.... }	Route is clear.	Proceed.	Clear signal.

\* Diagonal — At an angle of 60° degrees below the horizontal.

## DISTANT SIGNALS.

SIGNAL.	OCCASION FOR USE.	INDICATION.	NAME.
COLOR.	The signal will be displayed when	For enginemen and trainmen	As used in rules.
Horizontal Arm or } Yellow Light, ... }	Home signal at } stop..... }	Proceed with } caution to the } home signal. }	Caution signal.
* Diagonal Arm or } Green Light, .... }	Home signal at } proceed..... }		

\* Diagonal.—At an angle of 60 degrees below the horizontal.

The arm of a home signal has a square end; of a distant signal, a forked end.

The governing arms are displayed to the right of the signal mast, as seen from an approaching train.

The back view of a signal does not govern the movement of a train.

When there is more than one signal on a mast, the highest signal gives indications for the main route; and in the case of a two-arm dwarf signal, it governs the route to the right.

## RULES.

602. Interlocking signals, unless otherwise provided, do not affect the movements of trains under the time table or train rules; nor do they dispense with the use or the observance of other signals whenever and wherever they may be required.

## SIGNALMEN.

611. The normal indication of home signals is Stop.

611 (a). A back white light indicates that the clear signal is displayed.—A back blue light on the home signal indicates that the stop signal, and on the distant signal that the caution signal is displayed.

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612. Levers, or other operating appliances, must be used only by those charged with the duty and as directed by the rules.

613. Signal levers must be kept in the position giving the normal indication, except when signals are to be cleared for an immediate train or engine movement.

614. When the route is clear, the signals must be cleared sufficiently in advance of approaching trains and engines to avoid delay.

615. Signals must be restored so as to give the normal indication as soon as the train or engine for which they were cleared has passed them.

616. If necessary to change any route for which the signals have been cleared for an approaching train or engine, switches must not be changed or signals cleared for any conflicting route until the train or engine, for which the signals were first cleared, has stopped.

617. A switch or facing point lock must not be moved when any portion of a train or an engine is standing on, or closely approaching, the switch or detector bar.

618. Levers must be operated carefully and with a uniform movement. If any irregularity, indicating disarranged connections, is detected in their working, the signals must be restored so as to give the normal indication, and the connections be examined.

619. During cold weather, the levers must be moved as often as may be necessary to keep connections from freezing.

620. If a signal fails to work properly, its operation must be discontinued and the signal secured so as to give the normal indication until repaired.

621. Signalmen must observe, as far as practicable, whether the indication of the signals corresponds with the position of the levers.

622. Signalmen must not make nor permit any unauthorized alterations or additions to the plant.

623. If there is a derailment or if a switch is run through, or if any damage occurs to the track or interlocking plant, the signals must be restored so as to give the normal indication, and no train or switching movement permitted until all parts of the interlocking plant and track liable to consequent injury have been examined and are known to be in a safe condition.

624. If necessary to disconnect a switch from the interlocking apparatus, the switch must be securely fastened.

625. During storms or drifting snow, special care must be used in operating switches. If the force whose duty it is to keep the switches clear is not on hand promptly, when required, the fact must be reported to the Superintendent.

626. If any electrical or mechanical appliance fails to work properly, the Superintendent must be notified and only duly authorized persons permitted to make repairs.

627. When switches or signals are undergoing repairs, signals must not be given for any movements which may be affected by such repairs, until it has been ascertained from the repairmen that the switches are properly set for such movements.

628. Signalmen must observe all passing trains and note whether they are complete and in order; should there be any indication of conditions endangering the train, or any other train, the signalman must take such measures for the protection of trains as may be practicable.

629. If a signalman has information that an approaching train has parted, he must, if possible, stop trains or engines on conflicting routes, clear the route for the

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parted train, and give the Train-parted signal to the engineman.

630. Signalmen must have the proper appliances for hand signalling\* ready for immediate use. Hand signals must not be used when the proper indication can be displayed by the fixed signals. When hand signals are necessary they must be given from such a point and in such a way that there can be no misunderstanding on the part of enginemen or trainmen as to the signals, or as to the train or engine for which they are given.

631. If necessary to discontinue the use of any fixed signal, hand signals must be used and the Superintendent notified.

632. Signalmen will be held responsible for the care of the interlocking station, lamps and supplies; and of the interlocking plant, unless provided for otherwise.

633. Lights in interlocking stations must be so placed that they cannot be seen from approaching trains.

634. Lights must be used upon all fixed signals from sunset to sunrise, and whenever the signal indications cannot be clearly seen without them.

635. If a train or engine over runs a stop-signal, the fact, with the number of train or engine, must be reported to the Superintendent.

636. Only those whose duties require it shall be permitted in the interlocking station.

#### ENGINEMEN AND TRAINMEN.

661. Trains or engines must be run to but not beyond a signal indicating stop.

662. If a clear signal, after being accepted, is changed to a stop signal before it is reached, the stop must be

\* Hand signalling includes the use of lamp, flag, torpedo and fusee signals.

made at once. Such occurrence must be reported to the Superintendent.

663. Enginemen and trainmen must not accept clear hand signals as against fixed signals until they are fully informed of the situation, and know that they are protected. Where fixed signals are in operation, trainmen must not give clear hand signals against them.

664. The engineer of a train which has parted must sound the whistle signal for Train-parted on approaching an interlocking station.

665. An engineer receiving a Train-parted signal from a signalman, must answer by the whistle signal for Train-parted.

666. When a parted train has been re-coupled, the signalman must be notified.

667. Sand must not be used over movable parts of an interlocking plant.

668. Conductors must report to the Superintendent any unusual detention at interlocking plants.

669. Trains or engines stopped in making a movement through an interlocking plant, must not move in either direction until they have received the proper signal from the signalman.

670. Passenger trains must not exceed a speed of 12 miles and other trains a speed of 8 miles per hour over interlocked railway crossings, junctions, and draw bridges.

#### REPAIRMEN.

681. Repairmen are responsible for the inspection, adjustment and proper maintenance of all the interlocking plants assigned to their care.

682. Where the condition of switches or track does not admit of the proper operation or maintenance of the interlocking plant, the fact must be reported to the Superintendent.

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683. When any part of an interlocking plant is to be repaired, a thorough understanding must be had with the signalman, in order to secure the safe movement of trains and engines during repairs. The signalman must be notified when the repairs are completed.

684. If necessary to disconnect any switch, it must be securely fastened before any train or engine is permitted to pass over it.

685. Alterations or additions to an interlocking plant must not be made unless authorized by the superintendent.

686. Repairmen when on duty, or subject to call, must keep the proper officer advised as to where they can be found, and respond promptly when called.

## INSTRUCTIONS TO BE OBSERVED IN CASES OF PERSONAL INJURY.

1. By-standers should not be permitted to crowd about an injured person.

2. A written dispatch or telegram should be sent at once to the nearest surgeon, giving such particulars as will enable him to bring the necessary remedies and appliances.

3. The injured person should not be moved until it is known what part is injured, and anything pressing upon or holding it is removed.

4. In moving the injured person a stretcher should be used, if obtainable; but in any event the body should be very gently raised and moved, any injured limb being carefully supported.

5. In all cases the use of stimulants should be avoided, except under medical advice.

### Bleeding Wounds.

6. It should be ascertained at once where the blood is coming from, and if it is coming out bright red and by spurts, pressure should at once be applied by a finger on the bleeding point until the blood stops.

7. In the case of a wound on an arm or leg, the bleeding can be stopped by placing a smooth stone or a piece of wood or cork on the main artery (on the arm, on the inside between the elbow and shoulder; and on the leg, on the inside of the thigh) under a handkerchief tied loosely around it and the limb, and then tightened by twisting a stick in it. The pressure should not be greater than what may be required to stop the bleeding, and should not be applied too long in one place, but be changed occasionally. The main artery can be accurately located by feeling for the pulsations.

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8. Wounds, whether bleeding or otherwise, should be covered with a piece of clean linen, moistened occasionally with clean water.

#### **Injuries to the Head.**

9. In case there is any bleeding, it should be stopped by pressure from a linen pad, placed over the wound and held there securely by a bandage, unless the bleeding comes from the eyes, nose, or ears, in which event, the head should be placed on one side, so as to allow the blood to run out of the mouth. The feet should be kept warm, if possible, by the application of hot bricks, which should be wrapped in cloths, so as not to burn the skin.

10. Injuries to the head are usually accompanied by vomiting, followed by sleeping; and the injured person should in all such cases be kept absolutely at rest.

11. As the skull may be broken and depressed, causing pressure on the brain, care should be exercised not to press it hard with the points of the fingers or otherwise; and the head should be kept slightly raised, and wet cloths be applied to it.

#### **Broken Ribs or Bruised Chest.**

12. A broad bandage should be applied around the chest or ribs, to prevent movement as far as possible, and the injured person be kept on his or her back.

#### **Broken Back.**

13. This is usually accompanied by paralysis and loss of sensation in the limbs below the injury, and the injured person should be kept at rest in the most comfortable position.

### **Broken or Injured Arm, Leg or Foot.**

14. If the bones are pushed through the skin, they should be gently replaced after being carefully washed, with, if possible, clear running or boiled water, and the injured limb be placed in as nearly the same position as the uninjured one, and kept there by a splint on either side, held in place by bandaging. In the case of a broken arm, the hand should be put in a sling. A patient should never be lifted by an injured limb, nor the limb be allowed to remain unsupported.

15. In order to keep a restless or delirious person who is badly injured about legs, feet, or arms quiet, long stockings, bags, or pillow cases should be filled with dry sand or earth and placed beside and bandaged to the injured limbs. This will tend to prevent the parts jerking, and is especially useful in moving persons a long distance by train or otherwise.

### **Broken Collar Bone.**

16. A small pad should be put in the arm pit, the elbow raised by a bandage placed beneath it, and the whole arm bound to the body by bandaging.

### **Burns or Scalds.**

17. The clothes should be cut off and sweet oil, castor oil, linseed oil, vaseline, or flour, covered with cotton batting or linen so as to exclude the air, be applied.

### **Frost Bites.**

18. The frozen parts should, on no account, be rubbed, but should be kept in cold water until the frost is out of them. The temperature of the water should then be gradually raised to 99°.

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