



# THE BELT RAILWAY COMPANY OF CHICAGO

## TRANSPORTATION GENERAL ORDER #2018-012

Effective 0001, Monday, September 10, 2018

**To: ALL CONCERNED**

**Subject: BRC Positive Train Control Test Train Operation**

**1. Timetable #6, Item 2, Individual Line Segment Station Pages, 59<sup>th</sup> Street Line  
(Page 12)**

1. Method of Operation:

Operating Characteristics – MAIN TRACK(S): (SUPERSEDE)

<u>METHOD</u>	<u>TRACK</u>	<u>LOCATION</u>
PTC (TESTING ONLY)	MT1, MT2	55 <sup>TH</sup> STREET to 65 <sup>TH</sup> STREET
CTC	MT1, MT2	55 <sup>TH</sup> STREET to WEST SUB
CTC	NORTH BLUE ISLAND LEAD	WEST SUB to IHB CP 258
CTC	SOUTH BLUE ISLAND LEAD	WEST SUB to IHB CP 258

**PTC will not be cut in on train movements on the 59<sup>th</sup> Street Line, except PTC Test Trains, when authorized by proper authority.**

2. **General Code of Operating Rules (G.C.O.R.), Seventh Edition**, effective April 1, 2015, Chapter 15

**Chapter 15 – Track Bulletins (Entire Chapter applies for PTC Test Trains Only)**

**BRC System Special Instruction modifications noted below**

**RULE 15.1 – Track Bulletins – (Addition)**

Track Bulletin Rules, GCOR Chapter 15, are in effect for PTC Test Trains only while actively testing.

On the BRC, a Daily Operating Bulletin (DOB) may be issued in lieu of a Track Warrant to deliver track bulletins.

DOB(s) are issued as needed and contain the following track bulletin forms:

- Speed Restrictions (Form A)
- Protection of Men or On-Track Equipment (Form B - Rule 15.2)
- Other Specific Instructions (Form C)
- Outside Contractor Flagman (Form F – SSI Rule 6.33)
- Track Out of Service (Form O – Rules 15.4,15.5)
- Automatic Crossing Warning Device Malfunction (Form X – Rule 6.32.2)
- Track Condition Messages (TCM)

Daily Operating Bulletin properties:

- The DOB is used to deliver track bulletins and other information
- The DOB does not grant authority to occupy main track.
- Each DOB supersedes the previous DOB. The DOB will be issued a minimum of one time per day, or more as required.
- Employees must always review the entire DOB for completeness.
- Additions to the DOB are permitted in accordance with Rule 15.7.
- Deletions from the DOB are permitted in accordance with Rule 15.13.
- Employees whose duties are affected by a timetable, must have a current copy of the DOB, this DOB will be in effect for that entire tour of duty.
- Other relevant operating information as determined by the Train Dispatcher or proper authority.

All crew members must obtain a current DOB prior to entering BRC property, unless instructed by the Train Dispatcher. All crew members are responsible for complying with the requirements of the DOB, and reminding each other of those requirements.

MW Employee(s) in Charge (EIC), and any Roadway Workers, On Track Equipment Operators (OTE), or employees who wish to occupy any track, must possess a current DOB, unless otherwise instructed by the Train Dispatcher.

**Rule 15.1.1 Changing Address of Track Warrants or Track Bulletins (Supersede)**

The Daily Operating Bulletin (DOB), when used to deliver track bulletins, is not addressed to a specific train.

Address changes are not necessary; however, the Train Dispatcher must be advised of locomotive number being used to identify the movement, before movement occupies the main track.

**Rule 15.1.2 Cancelling a Track Bulletin: (Addition)**

When necessary the Train Dispatcher can void a Track Bulletin or a Daily Operating Bulletin verbally.

**15.2 Protection by Track Bulletin Form B – Work Zones (Supersede)**

When using a Track Bulletin to provide protection, employees must:

- Display track flags as specified in Rule 5.4.7 (Display of Red Flag)

A train must not enter the limits, unless instructed by the employee in charge.

A train within the limits at the time a track bulletin Form B takes effect must not make further movement without permission of the employee in charge.

A crew member must attempt to contact the employee in charge giving the train's location and track to be used two miles from the start of the restriction. The employee in charge will use the following format to establish communication with the train:

**"Employee in charge of Form B Track Bulletin #, Gang #, Between Milepost \_\_\_ and Milepost \_\_\_ on (Line)."**

A train within the limits, unless otherwise restricted, must move at the speed(s) specific by the employee in charge as stated in Item A.

#### A. Instructions

After communication with the train has been established, the employee in charge (EIC) will use the following format to grant a train permission to proceed through the Form B limits:

**"(Engine Number) may pass the red flag at MP \_\_\_\_\_ on (Track) \_\_\_\_\_ on the (Line) \_\_\_\_\_, without stopping)."**

**"(Engine Number) may enter the limits at MP \_\_\_\_ and proceed at (one of the following speeds)",** specifying route:

- **"Maximum Authorized Speed, unless otherwise restricted"**
- **"Restricted Speed"**
- **A specific speed specified by the employee in charge**

**Note:** In the absence of a speed being specified, a train authorized to proceed thru the working limits will proceed at restricted speed.)

To require a train to stop at a designated location within the limits, add the following:

- **"Stop at MP \_\_\_\_\_ until additional instructions are received"**

#### B. Repeat Instructions

A crewmember must repeat the above instructions, and the EIC giving the instructions must acknowledge them before they can be followed.

Once instructions are received from the EIC, if the track route changes from previous instructions received, contact the EIC to determine that the previous instructions apply on the new track route before proceeding on the new route.

The movement must not change direction or initiate movement after stopping within the working limits without permission from the EIC.

#### C. Entering the Limits (Add new paragraph)

Before entering the track(s) governed by the limits of a Form B track bulletin, from any location other than the beginning of the Form B limits, obtain permission from the EIC.

Crews that enter the limits of a Form B track bulletin that plan to stop, must inform the EIC of all movement that will be made within the limits.

If a train stops within the limits of a Form B for any reason, other than instruction from the EIC, the train must obtain permission from the EIC to restart movement.

**15.2.1 Protection for On-Track Equipment (Supersede):**

A Track Bulletin Form B does not grant authority for on-track equipment to occupy the main track

**15.3 Authorizing Movement Against the Current of Traffic (Application)**

Rule does not apply on BRC

**15.4 Protection When Tracks Removed from Service (Supersede)**

A Form O Track Bulletin, Form C Track Bulletin, or General Order will be used to communicate tracks removed from service, in the application of Rule 15.4 and Rule 15.5.

Before a track is removed from service, it must be protected.

In CTC territory, and at Manual Interlockings, the Train Dispatcher is responsible for applying effective blocking devices to protect the out of service portion of the railroad, when practicable, before a Track Bulletin is issued.

Track Bulletin Form O or Track Bulletin Form C may protect tracks removed from service by designating the track(s), and naming the points at each end of the track and the employee who may authorize use of the track.

Trains must not use this track, unless the track bulletin states the name of the employee who may authorize use, and this person directs all movement.

Movements on any track identified in Track Bulletin Form O or Track Bulletin Form C, in application of this rule, must be made at restricted speed.

Proper authority from the control operator must also be received to pass an absolute signal displaying a Stop indication to enter the out of service track.

**15.5 Protection When Tracks Blocked with Equipment (Supersede)**

Notify the train dispatcher when main tracks, sidings, or other tracks; which are normally clear, are blocked with equipment and cannot be cleared.

When a main track is blocked, provide protection as specified by Rule 6.20 (Equipment Left on Main Track).

On the BRC, Form O or Form C Track Bulletin may be used to deliver information about equipment left on main track.

### **15.6 Change of a General Order, Special Instructions, Or Rule (Addition)**

A Form C Track Bulletin may contain an instruction to change a General Order, Special Instruction, or Rule.

### **15.7 Copying Track Bulletins (Supersede)**

The Conductor or Engineer, or Conductor and Helper on RCL assignments, must have a copy of the track bulletins issued to their train and each crew member must read and understand them.

The following applies when track bulletins are transmitted verbally as additions to the Daily Operating Bulletin (DOB):

- 1) Employee will enter all the applicable information on the Daily Operating Bulletin.
- 2) The employee will repeat the information to the train dispatcher as transmitted.
- 3) The Train Dispatcher will check it, and if repeated correctly will say, "**OK**" and give the time and his/her initials.
- 4) The employee will enter the OK time and the train dispatcher's initials on the track bulletin and repeat the information to the dispatcher.
- 5) The Train Dispatcher will, if repeated correctly, state, "**that is correct.**"

When necessary employees may relay track bulletins.

### **15.10 Retaining Track Bulletins (Supersede)**

Employees must retain and comply with the daily operating bulletin on all trips during their tour of duty.

Employees must be able to provide the number of the DOB in their possession to the dispatcher any time the movement enters or re-enters main track, or when requested by the train dispatcher.

### **15.11 Track Condition Messages (Addition)**

A Track Condition Message (TCM) may be used to communicate information that is not directly related to train movement, but still pertinent to train operation and employee safety. TCM's may be issued for conditions on main track or other than main track.

Examples of usage include, but are not limited to, areas of bad footing or missing signage, close clearance changes, tracks in a yard that are out of service, and other items that are needed to insure employee safety.

TCM's may provide information on issues for locations on other than main track. Conductors must insure that TCM information is included in job briefings whenever applicable.

### **15.15 Protection of Automatic Crossing Warning Device Malfunctions (New)**

When crossing warning devices are **MALFUNCTIONING**, are **DISABLED**, or have an **ACTIVATION FAILURE**, this information will be communicated using Track Bulletin Form X or Track Bulletin Form C.

GCOR 6.32.2, as amended by System Special Instructions, applies as specified in the track bulletin.

On the BRC, Track Bulletin Form X or Track Bulletin Form C may be issued on both main track, and on other than main track, to deliver crossing warning malfunction advice when necessary.

Issuance of restrictions for crossing malfunctions on Other Than Main Track Segments will be confined to the Elsdon Industrial Lead and South Chicago District Industrial Lead.

3. **General Code of Operating Rules (G.C.O.R.), Seventh Edition**, effective April 1, 2015, Chapter 18:

#### **Currently Reads:**

18.0 Section Reserved

#### **Is Changed to Read:**

### **Rule 18.0 Rules Applicable Only In Positive Train Control (PTC) Territory**

#### **Rule 18.1 Positive Train Control Territory (Testing)**

PTC territory is specified in individual line special instructions.

PTC test trains only may operate in PTC territory with PTC cut in for the purposes of testing.

All other train movements will not cut in PTC, unless authorized by proper authority.

#### **Rule 18.2 Taking Charge of PTC Equipped Trains**

When taking charge of a train in PTC territory, or before entering PTC territory, the train must not depart until the engineer confirms:

1. The PTC circuit breaker and cut out switches are in the on position.
2. The PTC system on the controlling locomotive is initialized.
3. Departure test is performed at the train's initial terminal or when prompted by the PTC system.

**Rule 18.3 Broken or Missing Seals**

Unless authorized, do not break the protective seals on PTC devices. Train crews must report broken or missing PTC seals to the train dispatcher.

**Rule 18.4 PTC Cut Out**

The PTC system may only be cut out or disabled when authorized by rule or when proper authorization, from both the Train Dispatcher and proper authority has been received.

**Mechanical or PTC Team Requested Cut Out**

Mechanical Department or BRC PTC Team managers can request the crew to cut out PTC to support troubleshooting activities. The cut out activity does not authorize the moving of a controlling locomotive by train crews without authority of the Train Dispatcher.

**Rule 18.5 PTC Trip Completion**

At the completion of the trip, the engineer must log out of PTC.

**Rule 18.6 Consist Data**

The engineer must review consist data displayed by the PTC system and correct if necessary. The PTC consist data must be updated after any setouts or pickups.

The engineer must confirm all consist data displayed by the PTC system is accurate.

**Rule 18.6.1 Comparison of PTC Display Information**

After successful initialization and before departing, crew members on the controlling locomotive must compare information such as track bulletins, restrictions, and authorities displayed on the PTC display with the copies in their possession.

The train dispatcher may deliver mandatory directives and restrictions verbally. When a crew member receives a mandatory directive or restriction, it must then be compared to the PTC display.

When the PTC display does not conform with a wayside or cab signal indication, maximum authorized speed, mandatory directive, timetable, or special instruction, be governed by the most restrictive.

**Rule 18.7 PTC System Inputs and Prompts**

Inputs and responses to prompts must be accurate and timely to prevent an unnecessary PTC enforcement or delay. The engineer must operate the train in response to a PTC prompt to prevent a penalty brake application, consistent with good train handling. If improper input or response to a prompt is made, it must not be acted upon until corrected or resolved.



**Rule 18.8 PTC Enforcement**

If a train is stopped by PTC enforcement, the engineer must notify the train dispatcher and provide the following information:

- Identifying engine initials and number.
- Time and milepost location where the PTC enforcement was initiated.
- Reason for the PTC enforcement, if known.

Milepost location of the head end of the train when stopped.

**Rule 18.9 Switching**

Reserved for future use.

**Rule 18.10 Working with Helper Units****A. Helpers added to head end of the train**

1. Perform soft cut out of the PTC system on lead engine of the train after helper unit(s) are added.
2. Train dispatcher must be notified that PTC has been cut out.
3. PTC must be cut in at the first practical location after helpers are removed.

**B. No changes are required to the PTC system on the lead engine when helpers are added to the rear end of the train.****Rule 18.11 Section Reserved****Rule 18.12 Movements Without PTC**

A train may operate in PTC territory without the controlling locomotive being PTC equipped or initialized, provided the movement is engaged in freight switching, transfer train service (including yard, local, and industrial), hostling, work train service, or the assembling or disassembling of trains, under the following conditions:

- A. The movement originates in a yard, or within 20 miles of a yard with the yard as the final destination point.
- B. The movement does not travel in excess of 20 miles from the point of entry onto PTC-equipped main track.
- C. The movement must not exceed Restricted Speed unless all the following requirements are met:
  1. No other train or locomotive is operating in the same authorized limits without operational PTC.
  2. No roadway worker has working limits on any part of the same authorized limits.
  3. A Class 1, 2 or Transfer Train brake test has been performed in which case the movement must not exceed 30 MPH.

**Rule 18.13 Positive Train Control**

PTC is an overlay system designed to assist crews in the safe operation of their train. Information displayed by the PTC system is for display purposes only and is not to be used to relieve a crew of their responsibilities under existing rules for the train's current method of operation.

**Rule 18.14 Training / Qualification**

Only PTC qualified employees are authorized to operate PTC enabled equipment within PTC territory.

**Rule 18.15 Initializing PTC**

Prior to initializing PTC, a crew member must verify with the train dispatcher that the lead locomotive is the identifying unit. If the lead engine is not PTC equipped and another engine in the consist is PTC equipped, the PTC equipped engine must be moved to the lead position, unless authorized by the Train Dispatcher

Inform the Train Dispatcher, and be governed by their instructions, if initialization fails after 3 attempts or takes longer than 30 minutes.

**Rule 18.16 Departure Test**

A PTC departure brake test must be performed:

- During Initialization if:
  - A successful departure test has not been completed within the last 24 hours;
  - The Onboard PTC system has been rebooted since the last departure test;
  - The PTC circuit breakers have been placed in the "ON" position since the last departure test;
  - The CUT OUT switches have been moved to the "CUT IN" position since the last departure test; or
  - The previous departure test was unsuccessful;
- When the "DEPART" flag is displayed on the CDU; or
- When instructed to do so by the Mechanical Department or the PTC Help Desk.

The brake pipe pressure must be above 75 psi to perform a departure test.

**Rule 18.17 Restrictions and Authorities**

The train crew is still responsible for adhering to all restrictions, whether they are enforceable by PTC or not.

When the PTC Onboard system receives an enforceable restriction and the train is within the limits of that restriction, the PTC system will warn the crew and provide a 30 second enforcement delay to allow the crew to comply. Authorities and restrictions received en route will be received by the crew verbally from the train dispatcher prior to the PTC system electronically receiving the restriction or authority.

PTC establishes no authority or restrictions for train movement. Only existing GCOR methods of authorizing train movements will be used.

**Rule 18.18 Loss of Electronic Display Functionality**

Should the PTC electronic display (CDU) become inoperable:

- Immediately stop the train consistent with good train handling
- Contact the train dispatcher and be governed by their instructions.

Trains must not continue movement until:

- The electronic display returns to normal operation (i.e. the PTC Onboard shows "ACTIVE" or "DISENGAGED on the display screen, etc.); or,
- The train dispatcher or the PTC Help Desk gives permission for the train to proceed with PTC in the CUT OUT mode.

**Rule 18.19 Light Locomotive Movements**

Locomotives, equipped with functional dynamic brakes, should not be operated on PTC enabled track unless coupled to at least 5 cars with 100% of the air brakes functioning properly on each locomotive. This rule does not apply if dynamic braking is not used to control the movement of the train or the train is not operating using PTC.

When using dynamic braking and operating using PTC, if it is necessary to operate locomotives on PTC enabled track with less than 5 cars that have 100% of the air brakes functioning properly per locomotive, the independent brake valve handle must not be actuated if the PTC system initiates an application of the brakes.

**Rule 18.20 Operative Brake Count**

The PTC system must remain in the CUT OUT operating state while on PTC enabled track if more than 5% of the train's air brakes are inoperative.

### **Rule 18.21 Reporting to the Train Dispatcher**

The engineer must report the following conditions and occurrences to the train dispatcher:

- Any discrepancies between the PTC display and any mandatory directives, rules, wayside system or other onboard system;
- Any time PTC indicates train braking is in progress;
- The train is stopped due to a PTC warning; or
- PTC is suspected of not providing a warning when it should have.

When making a report to the train dispatcher, include the following information:

- Locomotive initials and number;
- Time and location of occurrence; and
- Any unusual occurrence/conditions which may have contributed to the problem.

### **Rule 18.22 Reverse Movements in PTC Equipped Territory**

When making a reverse movement where PTC is in effect, the restricted speed requirement is enforced by PTC. Trains making a reverse movement must comply with GCOR 6.4. When moving the reverser from forward to reverse (or reverse to forward), the locomotive engineer must first verify that the PTC Onboard display has properly updated the orientation of the train with respect to the map displayed (i.e. the mileposts and terrain in advance of the train has been reversed from its' previous orientation) before moving the train.

### **Rule 18.23 Restricted Speed in PTC Territory**

PTC will enforce a 20 MPH maximum speed when entering authorized limits requiring restricted speed. The PTC system will provide an over speed warning at 20 MPH and over speed braking enforcement at 21 MPH. The actual speed which allows a train to stop within 1/2 the range of vision will not be enforced by PTC. The crew is still responsible for adhering to the requirements of GCOR 6.27.

PTC will not enforce restricted speed within terminal limits and will not prevent train-to-train collisions while operating at restricted speed inside a joint authority.

### **Rule 18.24 Electronically Received Permission and Authority to Occupy Main Track from the Train Dispatcher or EIC**

When required to receive verbal permission, or authority, to occupy the main track from the train dispatcher or an EIC, DO NOT press the "RECEIVED" or "ACKNOWLEDGE" soft key on the PTC CDU until permission, or authority, has been received and "OK'd" by the train dispatcher or EIC.

Train crews must not enter or operate within track limits requiring verbal permission, or authority, to occupy without first receiving the verbal permission, or authority. This also applies to work zones, enter main track and passing a signal displaying a STOP indication.

### **Rule 18.25 Engineer PTC Trip Report**

At the completion of an engineer's tour of duty, an "Engineer PTC Trip Report" must be completed and faxed to the Manager of Terminal Operations. A copy of the report must also be provided to the Manager of Operating Practices.

Only information from the current tour of duty is to be entered on the form. Information to be included on the form includes, but is not limited to, the following:

- Any PTC initiated application of the brakes, other than during a departure test;
- Any unusual event/behavior encountered by the crew that is PTC related (i.e. synchronization errors, discrepancy between what is displayed on the CDU and what is observed in the field, unexpected operating state changes, etc.)

**These requirements only apply if operating with PTC Cut-In on the BRC.**

#### **4. General Code of Operating Rules (G.C.O.R.), Seventh Edition, effective April 1, 2015, Glossary:**

**Is Changed by Adding:**

#### **Abbreviations**

PTC--Positive Train Control  
PIH--Poisonous Inhalation Hazard  
TIH--Toxic Inhalation Hazard

#### **Glossary Terms**

#### **Back Office Server System (PTC)**

A computer storehouse for speed restrictions, track geometry, and wayside signaling databases.

#### **Computer Aided Dispatching System (CAD)**

A computer system that provides functionality that allows the train dispatcher to manipulate signals and switches, as well as create, delete, and disseminate mandatory directives related to the speed of the railway, protection of workers, protection of highway/rail grade crossings and protection of out of service track.

#### **Hard Cut In (PTC)**

A state of the PTC system when PTC cut out switches are placed in the cut in position.

#### **Hard Cut Out (PTC)**

A state of the PTC system when PTC cut out switches are placed in the cut out position.

**Non-enforcement State (PTC):**

A state when the PTC system is cut out, failed, degraded, disengaged, or experiencing other unenforceable conditions.

**PTC Equipped (PTC):**

A locomotive equipped with an operable PTC system.

**Positive Train Control (PTC):**

A safety overlay system designed to monitor train movement and designed to prevent train to train collisions, over speed violations, movement into established work zone limits without permission, and movement over an improperly lined main track switch.

**Restricted Speed Enforcement (PTC):**

PTC enforcement of restricted speed is limited to the 20MPH speed requirement specified in GCOR 6.27,

Restricted Speed. PTC cannot protect against failure to comply with the requirement to be able to stop within half the range of vision.

**Soft Cut Out (PTC):**

A state of the PTC system resulting from selection of the cut out key on the PTC display.

**Status – PTC (PTC):**

- **CUT OUT**
- **DISENGAGED**
- **FAILED**
- **INITIALIZING**
- **SWITCHING**

**Work Zone (PTC):**

PTC protected Form B Track Bulletin Restriction

C. L. Gorski  
Superintendent Transportation

Transportation General Orders in Effect:

<b>Year of Issuance</b>	<b>Numbers</b>
<b>2018</b>	<b>18-GO011, 18-GO012</b>