




To accompany Signal Engineering Deviation application for proposals to change Point Lock and Detection Testing frequency

Date: _____

Location: _____ Points No: _____

Turnout Type: Conventional

1. General turnout condition including timbers or beams and ballast – do not include signalling equipment in this part of the assessment.

	Condition Rating					or
	V Poor	Poor	Fair	Good	V Good	
60 kg 1 in 8½ or 1 in 10½ on concrete beam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
60 kg 1 in 15 on concrete beams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
60 kg 1 in 8½ or 1 in 10½ on timber sleepers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
60 kg 1 in 15 on timber sleepers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
53 kg 1 in 15 housed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
53 kg 1 in 8½ or 1 in 10½ std switch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
53 kg 1 in 8½ or 1 in 10½ thick switch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
47 kg or lighter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Ballast Condition (Fouled ⇒ Clean)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Ballast Height (Low/Excessive ⇒ Correct)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Is the turnout pumping (High ⇒ negligible)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Has the ballast through the turnout been glued (bonded)	<input type="radio"/>	Yes	<input type="radio"/>	No		
Super-elevation through the turnout	<input type="radio"/>	None	<input type="radio"/>	<35mm	<input type="radio"/>	>35mm
Switch tip condition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Type of chair	<input type="radio"/>	Rail Brace	<input type="radio"/>	Pressed Steel		
Switch fit up to stockrail:						
Normal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Reverse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Flangeway clearance (behind open switch)	<input type="radio"/>	<60mm	<input type="radio"/>	>60mm		
Evidence of Flange contact		Normal Switch	NO	YES	Reverse Switch	NO YES
General level and alignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Turnout Geometry	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
Drainage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Gauge	<input type="radio"/>	< 1432	<input type="radio"/>	1432-1440	<input type="radio"/>	>1440
Turnout switch alignment	<input type="radio"/>	within 25 mm of square	<input type="radio"/>	more than 25 mm out of square		
Evidence of stockrail longitudinal movement	<input type="radio"/>	> 20 mm	<input type="radio"/>	10-20 mm	<input type="radio"/>	< 10 mm
Evidence of stockrail lateral movement	<input type="radio"/>	< 3 mm	<input type="radio"/>	> 4 mm		
Heel condition (if not flexible switch)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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Date: _____

Location: _____ Points No: _____

Turnout Type: Conventional

2. Traffic: Density, type and speed

Density: Trains per day	<input type="radio"/> < 5	<input type="radio"/> 5-20	<input type="radio"/> 20-50
	<input type="radio"/> 50 -100	<input type="radio"/> 100 - 200	<input type="radio"/> > 200
Type	<input type="radio"/> EMU	<input type="radio"/> XPT or Mixed	
	<input type="radio"/> Freight	<input type="radio"/> Heavy Haul	
Speed			
Straight Route	<input type="radio"/> < 60 kph	<input type="radio"/> 60 - 90	<input type="radio"/> 90 - 120
	<input type="radio"/> > 120 kph		
Turnout Route	<input type="radio"/> < 20 kph	<input type="radio"/> 20 - 40	<input type="radio"/> > 40 kph
Percentage of trains through turnout route	_____ %		
Line Class	_____		

3. Environment

Approach Conditions	<input type="radio"/> Continuously welded <input type="radio"/> Other turnouts <input type="radio"/> Rail joint within 3 m of tip				
Curvature approaching turnout	<input type="radio"/> none	<input type="radio"/> >400 m	<input type="radio"/> <400 m		
Rising grade approaching turnout	<input type="radio"/> < 1 in 60	<input type="radio"/> > 1 in 60			
Level approaching turnout	<input type="radio"/>				
Falling grade approaching turnout	<input type="radio"/> < 1 in 60	<input type="radio"/> > 1 in 60			
Locality Subject to flooding	<input type="radio"/> yes	<input type="radio"/> no			
Corrosive (coal and mineral traffic)	<input type="radio"/> yes	<input type="radio"/> no			
Seaboard	<input type="radio"/> yes	<input type="radio"/> no			
Derailment Severity ##	<input type="radio"/> 5	<input type="radio"/> 4	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1

Derailment severity is defined by the location of the turnout relative to bridges over rivers or roads, embankments, other running lines, building or overbridge supports, frequented public areas.

E.g. a turnout immediately ahead of a bridge could rate “5” (very high) whereas a turnout on a single line in open flat country could rate “1” (very low)

Date: _____

Location: _____ Points No: _____

Turnout Type: Conventional

4. Signalling Equipment: Type and condition

Type	<input type="radio"/> Electric	<input type="radio"/> EP	<input type="radio"/> mech
	<input type="radio"/> Hydraulic		
	<input type="radio"/> Clamp Lock	<input type="radio"/> Claw Lock	
Back Driver(s)	<input type="radio"/> None	<input type="radio"/> One	<input type="radio"/> Two

	V Poor	Poor	Fair	Good	V Good
Condition of external equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condition of mechanism(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Installation Standard					
Alignment of rodding			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electric Switch Machine	Type	_____			

Mechanical Drive	<input type="radio"/> Interlock Machine	<input type="radio"/> Ground frame
60 kg 1in 8¼ or 1 in 10½, additional gauge rod fitted	<input type="radio"/> Yes	<input type="radio"/> no
Type of extension piece	<input type="radio"/> ball joint	<input type="radio"/> rubber bush
For Mechanical operation only,		
Adjustment remaining on 10x18 crank	<input type="radio"/> < 65 mm	<input type="radio"/> > 65 mm
Escapement between bobbin and cradle	<input type="radio"/> <10 mm	<input type="radio"/> >10 mm

Lock and/or Detection Adjustment History		
Lock and/or detector required adjusted during testing or periodic maintenance at intervals of	<input type="radio"/> < 2 months	<input type="radio"/> 2 - 4 months
	<input type="radio"/> < 4 - 6 months	<input type="radio"/> 0 > 6 months

Lock and/or detection failure history (include only "adjustment" failures)

No of failures past 3 months at intervals of _____

No of failures past 12 months _____

Signed: _____
 Maintenance Signal Engineer

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To accompany Signal Engineering Deviation application for proposals to change Point Lock and Detection Testing frequency

Date: _____

Location: _____ Points No: _____

Turnout Type: Tangential

1. General turnout condition including timbers or beams and ballast- do not include signalling equipment in this part of the assessment.

	Condition Rating					
	V Poor	Poor	Fair	Good	V Good	
190 - 250 m radius on concrete beams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<i>or</i>
300 - 800 m radius on concrete beams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<i>or</i>
1200 m radius on concrete beams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<i>or</i>
190 - 250 m radius on timber sleepers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<i>v</i>	<i>or</i>
300 - 800 m radius on timber sleepers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<i>v</i>	<i>or</i>
1200 m radius on timber sleepers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<i>v</i>	
Ballast Condition (Fouled ⇒ Clean)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Ballast Height (Low/Excessive ⇒ Correct)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Is the turnout pumping (High ⇒ negligible)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Has the ballast through the turnout been glued (bonded)	<input type="radio"/>	Yes	<input type="radio"/>	No		
Super-elevation through the turnout	<input type="radio"/>	None	<input type="radio"/>	< 35 mm	<input type="radio"/>	> 35 mm
Switch tip condition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Switch fit up to stockrail:						
Normal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Reverse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Flangeway clearance (behind open switch)	<input type="radio"/>	< 60 mm	<input type="radio"/>	> 60 mm		
Evidence of Flange contact	Normal Switch	NO	YES	Reverse Switch	NO	YES
General level and alignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Turnout Geometry	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	
Drainage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Gauge	<input type="radio"/>	< 1432	<input type="radio"/>	1432-1440	<input type="radio"/>	> 1440
Turnout switch alignment	<input type="radio"/>	within 25 mm of square	<input type="radio"/>	more than 25 mm out of square		
Evidence of stockrail longitudinal movement	<input type="radio"/>	> 20 mm	<input type="radio"/>	10-20 mm	<input type="radio"/>	< 10 mm
Evidence of stockrail lateral movement	<input type="radio"/>	≥ 4 mm				

Date: _____

Location: _____ Points No: _____

Turnout Type: Tangential

2. Traffic: Density, type and speed

Density: Trains per day	<input type="radio"/> < 5	<input type="radio"/> 5-20	<input type="radio"/> 20-50
	<input type="radio"/> 50-100	<input type="radio"/> 100-200	<input type="radio"/> > 200
Type	<input type="radio"/> EMU	<input type="radio"/> XPT or Mixed	
	<input type="radio"/> Freight	<input type="radio"/> Heavy Haul	
Speed			
Straight Route	<input type="radio"/> < 60 kph	<input type="radio"/> 60 - 90	<input type="radio"/> 90 - 120
	<input type="radio"/> > 120 kph		
Turnout Route	<input type="radio"/> < 25 kph	<input type="radio"/> 25-50	<input type="radio"/> > 60-80
	<input type="radio"/> > 80 kph		
Percentage of trains through turnout route	_____ %		
Line Class	_____		

3. Environment

Approach Conditions	<input type="radio"/> Continuously welded		
	<input type="radio"/> Other turnouts		
	<input type="radio"/> Rail joint within 3 m of tip		
Curvature approaching turnout	<input type="radio"/> none	<input type="radio"/> > 400 m	<input type="radio"/> < 400 m
Rising grade approaching turnout	<input type="radio"/> < 1 in 60	<input type="radio"/> > 1 in 60	
Level approaching turnout	<input type="radio"/>		
Falling grade approaching turnout	<input type="radio"/> < 1 in 60	<input type="radio"/> > 1 in 60	
Locality Subject to flooding	<input type="radio"/> yes	<input type="radio"/> no	
Corrosive (coal and mineral traffic)	<input type="radio"/> yes	<input type="radio"/> no	
Seaboard	<input type="radio"/> yes	<input type="radio"/> no	
Derailment Severity ##	<input type="radio"/> 5	<input type="radio"/> 4	<input type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1

Derailment severity is defined by the location of the turnout relative to bridges over rivers or roads, embankments, other running lines, building or overbridge supports, frequented public areas.

E.g. a turnout immediately ahead of a bridge could rate “5” whereas a turnout on a single line in open flat country could rate “1”.

Date: _____

Location: _____ Points No: _____

Turnout Type: Tangential

4. Signalling Equipment: Type and condition

Type	<input type="radio"/> Electric	<input type="radio"/> EP			
Back Driver(s)	<input type="radio"/> None	<input type="radio"/> One	<input type="radio"/> Two		
	<input type="radio"/> One plus spring assist				

	V Poor	Poor	Fair	Good	V Good
Condition of external equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condition of mechanism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Installation Standard					
Alignment of rodding			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

OR

Electric Switch Machine	Type	_____			
Back Driver(s)	<input type="radio"/> None	<input type="radio"/> One	<input type="radio"/> Two		
	<input type="radio"/> One plus spring assist				

	V Poor	Poor	Fair	Good	V Good
Condition of external equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Condition of mechanism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Installation Standard					
Alignment of rodding			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Lock and/or Detection Adjustment History

Lock and/or detector required adjusted during testing or periodic maintenance at intervals of	<input type="radio"/> <2 months	<input type="radio"/> 2 - 4 months
	<input type="radio"/> <4 - 6 months	<input type="radio"/> 0 >6 months

Lock and/or detection failure history (include only "adjustment" failures)

No of failures past 3 months _____

No of failures past 12 months _____

Signed: _____
 Maintenance Signal Engineer

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