

Maintenance Schedule of Electrically Operated Points

Periodicity	Schedule Code
Fortnightly	EP1
Monthly	EP1,EP2
Quarterly	EP1,EP2, EP3, EP4
Half Yearly	EP4, EP5
Yearly	EP4,EP5

Schedule Code: EP1

Periodicity: Technician(Signal): Fortnightly Sectional SSE/JE(Signal): Monthly SSE (Signal)/Incharge : Quarterly

S.No.	Check the following:	ACTION	
1	The machine for tightness and free from rust & dirt. Cleaning, graphite/oiling of slide chairs. Lubrication of slide chairs and assembly up to 3 sleepers from the toe of switch by S&T staff.	Done	Not Done
2	Checking of Point Gear Assembly, slides, rollers & pins. Ensure that roller is free from wear and tear and falls freely on control and lift out disc.	Done	Not Done
3	Tightening of all nuts, check nuts & bolts, lock nuts holding the detector slides & lock slides with lugs and condition of split pins to be checked.	Done	Not Done
4	The Lubrication / Greasing of all gears and bearings, cleanliness & smoothness of commutator, checking contacts for freedom from pitting and proper adjustment.	Done	Not Done
5	Visual checks of Points insulations and stretcher bars not rubbing with any fixture.	OK	Not OK
6	The contacts for proper adjustment contact pressure& free from pitting. Wires are neatly dressed & clear of all moving part. Ensure they do not get trapped in the lid when closed.	OK	Not OK
7	All the bridge contacts make & break at the same time.	OK	Not OK
8	The setting of switch for having required amount of spring action.	OK	Not OK
9	Obstruction test of points with 5 mm test piece (to be kept at 150 mm from the toe of the switch) to ensure that point cannot be locked, detection contacts shall not make & friction clutch should also slip. However Detection contacts shall make with obstruction of 1.6 mm test piece (to be kept at 150 mm from the toe of the switch)	OK	Not OK
10	Also ensure that both sleepers are well packed & Ground connection rods are free from ballast.	OK	Not OK
11	Checked the insulation of Gauge tie plate, all stretcher bars, P/D brackets & driving lug and replaced if found damaged/broken.	OK	Not OK

Schedule Code: EP2

Periodicity: Signal Technician: Monthly (to be done by ESM in the presence of SSE/JE)

Sectional SSE/IE(Signal): Monthly SSE(Signal)/Incharge: Quarterly

1	Measurements of operating values (voltage & current) of point machines, with and without obstruction for normal and reverse operation. Current required to operate the machine in either direction shall be 1.5 to 2 times of its normal operation and friction clutch shall slip within this range. Replace machine when difference between normal operating current and current under obstruction is less than 0.5 A.																																																										
	<div>Parameters to be Recorded</div> <table><tr><th>दिनांक Date</th><th>परिचालन वोल्टेज, operating Voltage (>100 Volts) (N to R) (R to N)</th><th>बाधा वोल्टेज obstruction voltage (>80 volts) (N to R) (R to N)</th><th>डिटेक्शन वोल्टेज Detection Voltage (>24 Volts) (N to R) (R to N)</th><th>सामान्य कार्यकारी धारा Normal Working Current (1.5 - 2.5 Amp.) (N to R) (R to N)</th><th>बाधा / स्लिपिंग धारा obstruction/Slipping Current (>5 Amp.) (N to R) (R to N)</th><th>अवरोध परीक्षण obstruction test (3.25 mm) (N to R) (R to N)</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <table><tr><th>गो टेस्ट Go Test (1.6 mm Fall Safe test) (N to R) (R to N)</th><th>परिचालन समय Operating Time (4-5 Seconds) (N to R) (R to N)</th><th>अवरोध परीक्षण के दौरान परिचालन समय (>10 सेकंड्स) (N to R) (R to N)</th><th>फ्रिक्शन बलच स्लिप कर रहा है या नहीं (N to R) (R to N)</th><th>ट्रैक लॉकिंग टेस्ट Track Locking Test (0.5 औंस के प्रतिरोध से) (N to R) (R to N)</th><th>सिग्नल एवं निरीक्षण / अनुसंधान का संक्षिप्त विवरण (N to R) (R to N)</th><th>हस्ताक्षर Signature</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	दिनांक Date	परिचालन वोल्टेज, operating Voltage (>100 Volts) (N to R) (R to N)	बाधा वोल्टेज obstruction voltage (>80 volts) (N to R) (R to N)	डिटेक्शन वोल्टेज Detection Voltage (>24 Volts) (N to R) (R to N)	सामान्य कार्यकारी धारा Normal Working Current (1.5 - 2.5 Amp.) (N to R) (R to N)	बाधा / स्लिपिंग धारा obstruction/Slipping Current (>5 Amp.) (N to R) (R to N)	अवरोध परीक्षण obstruction test (3.25 mm) (N to R) (R to N)																						गो टेस्ट Go Test (1.6 mm Fall Safe test) (N to R) (R to N)	परिचालन समय Operating Time (4-5 Seconds) (N to R) (R to N)	अवरोध परीक्षण के दौरान परिचालन समय (>10 सेकंड्स) (N to R) (R to N)	फ्रिक्शन बलच स्लिप कर रहा है या नहीं (N to R) (R to N)	ट्रैक लॉकिंग टेस्ट Track Locking Test (0.5 औंस के प्रतिरोध से) (N to R) (R to N)	सिग्नल एवं निरीक्षण / अनुसंधान का संक्षिप्त विवरण (N to R) (R to N)	हस्ताक्षर Signature																							
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2	Checking of feed disconnection time under obstruction is not less than 10 Seconds.	Done	Not Done																																																								
3	Ensure Hose pipe/GI pipe in good condition and without gaps/access.	OK	Not OK																																																								
4	Check MS pins of Switch Extension piece/'P' bracket for any rib formation or excessive wear.	OK	Not OK																																																								
5	In case of Clamp type point machine, Lubricate the following moving parts of the clamp lock. (a) Stock rail bracket groove. (b) Moving part of tongue rail and lock arm assembly. (c) Between machine of lock bar and lock arm assembly																																																										
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Schedule Code: EP3

Periodicity: Sectional SSE/JE(Signal): Quarterly (Sectional SSE/JE & I/C SSE to carry out alternate inspections)

SSE(Signal)/Incharge: Quarterly (Sectional SSE/JE & I/C SSE to carry out alternate inspection)

Note : EP3 Schedule will be covered during joint Point & Crossing Inspection with P-WAY

Schedule Code: EP4

Periodicity: Technician(Signal): Quarterly Sectional SSE/JE(Signal): Half-yearly SSE(Signal)/Incharge : Yearly

1	Greasing/Oiling of point machine and Checking of all grease nipples in position.	Done	Not Done
2	Oiling of Point Gear Assembly, slides, rollers & pins with medium grade axle oil IS 1628. Avoid overflowing.	Done	Not Done
3	Smoothness& cleaning of Commutator, carbon brushes.	Done	Not Done
4	Ensure painting of connecting rods is satisfactory.	OK	Not OK

Schedule Code: EP5

Periodicity: Sectional JSSE/JE(Signal): Half-yearly SSE(Signal)/Incharge : Yearly

1	Check for detector contacts and cleaning if required, control contacts, friction clutch. Ensure contact pressure of control and detection contact is adequate. Ensure Brass tip on finger contact is intact. Conduct obstruction test.	OK	Not OK
2	Visual check of brass strips provided between detector slides, without removing them.	OK	Not OK
3	Checking of contact, connections and its effectiveness during power operation points.	OK	Not OK
4	Working of point using crank handle shall also be checked. It shall not be possible to insert Crank Handle without assigned Key. Interlocking with signals shall be checked	Done	Not Done
5	Checking of point motor insulation, cable and wire insulation (by 100 V Megger).	Done	Not Done
6	Testing of point tail cable from K Rack in N & R position of point with 100 V megger.	Done	Not Done