

**METROLINX SIGNALS & COMMUNICATIONS
GENERAL INSTRUCTIONS**

GI 303 - Battery Grounds and Isolation Faults Tests

Subdivision:	Project #:	
Location Name:	Mileage:	
<i>Meter Information</i>		
Meter Type/Model	Serial No.	Calibration Date & Due Date (YYYY/MM/DD)
Battery Bank Name:	Number of Cells	Bank Voltage Reading

Positive Lead on Positive Battery and Negative Lead on Ground				
Meter Scale Used	Voltage to Ground (AC on)	Voltage to Ground (AC off)	When Tested	Battery Grounds Test Result
<input type="checkbox"/> 60v <input type="checkbox"/> 15v <input type="checkbox"/> 3v <input type="checkbox"/> 0.6v <input type="checkbox"/> 0.25v			<input type="checkbox"/> Pre-Testing <input type="checkbox"/> Post-Testing	<input type="checkbox"/> Pass - No Ground Found <input type="checkbox"/> Discrepancy Found*
<input type="checkbox"/> 60v <input type="checkbox"/> 15v <input type="checkbox"/> 3v <input type="checkbox"/> 0.6v <input type="checkbox"/> 0.25v			<input type="checkbox"/> Pre-Testing <input type="checkbox"/> Post-Testing	<input type="checkbox"/> Pass - No Ground Found <input type="checkbox"/> Discrepancy Found*
Negative Lead on Negative Battery and Positive Lead on Ground				
Meter Scale Used	Voltage to Ground (AC on)	Voltage to Ground (AC off)	When Tested	Battery Grounds Test Result
<input type="checkbox"/> 60v <input type="checkbox"/> 15v <input type="checkbox"/> 3v <input type="checkbox"/> 0.6v <input type="checkbox"/> 0.25v			<input type="checkbox"/> Pre-Testing <input type="checkbox"/> Post-Testing	<input type="checkbox"/> Pass - No Ground Found <input type="checkbox"/> Discrepancy Found*
<input type="checkbox"/> 60v <input type="checkbox"/> 15v <input type="checkbox"/> 3v <input type="checkbox"/> 0.6v <input type="checkbox"/> 0.25v			<input type="checkbox"/> Pre-Testing <input type="checkbox"/> Post-Testing	<input type="checkbox"/> Pass - No Ground Found <input type="checkbox"/> Discrepancy Found*

Battery Isolation Faults Test <i>*Banks tested against*</i>				
Bank:	Bank:	Bank:	Bank:	Bank:
<input type="checkbox"/> Pass - No Isolation Fault <input type="checkbox"/> N/A	<input type="checkbox"/> Pass - No Isolation Fault <input type="checkbox"/> N/A	<input type="checkbox"/> Pass - No Isolation Fault <input type="checkbox"/> N/A	<input type="checkbox"/> Pass - No Isolation Fault <input type="checkbox"/> N/A	<input type="checkbox"/> Pass - No Isolation Fault <input type="checkbox"/> N/A

*Discrepancy Found - Ground Current Reading Required				
Ground current must not exceed 25mA on a 120V DC battery (3.1mA using S&C 360 Meter) or 2mA on a lower voltage battery (1.6mA using S&C 360 Meter), nor exceed 50% of the release value of any relay or electromagnetic device in the circuit. If the above conditions are not met, immediately disable the system that contains the grounds/faulst and ensure that train operations are protected, as per MX GI-301 (i). Do not start testing until ground discrepancies are resolved.				
Ground Current Reading (mA)	Actions Taken			
	<input type="checkbox"/> System containing ground is disabled and train operations are protected. <input type="checkbox"/> Responsible Supervisor Officer and Metrolinx advised to formulate a plan to eliminate ground.			

Location Notes				
Signal and Switch Operating Banks		Crossing Operating Banks		
<input type="checkbox"/> Switch Normal <input type="checkbox"/> Switch Reverse <input type="checkbox"/> Signals Lit	<input type="checkbox"/> Switch Normal to Reverse <input type="checkbox"/> Switch Reverse to Normal <input type="checkbox"/> Normal Conditions	<input type="checkbox"/> Gates Vertical <input type="checkbox"/> Gates Descending <input type="checkbox"/> Gates Horizontal	<input type="checkbox"/> Gates Ascending <input type="checkbox"/> Light Units Flashing <input type="checkbox"/> Normal Conditions	
Notes:				

Test Performed By (Print)	Test Performed By (Signature)	Date & Time (YYYY/MM/DD) (HH:MM)