


Inspection and Maintenance of Switches and Derails

Inspection & Maintenance of Electric Switches and Derails



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Inspection and Maintenance of Switches and Derails

Riders Depend on Us

What do you predict will be different between inspecting and maintaining manual vs. electric switches?



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Inspection and Maintenance of Switches and Derails

Outline

- Inspect and maintain electric switches and derails
- Inspect and maintain Components in Motor Compartment
- Demonstrate ability to perform friction clutch test
- Demonstrate ability to perform switch restoring circuit test

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Inspection and Maintenance of Switches and Derails

General Inspection & Maintenance



See video 5.1 Removing Covers on 5F Switch Machine - Courtesy MBTA
(<https://www.youtube.com/watch?v=Lv4KS-ZFNbY>)


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Inspection and Maintenance of Switches and Derails

General Inspection & Maintenance

Remove Covers


- Straddle machine, stay centered & balanced
 - On 5 series, use crank to move cutout switch to cutout position; remove padlock
- Grip covers
- Do not hit contacts
- Place cover in secure place



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Inspection and Maintenance of Switches and Derails

General Inspection & Maintenance



When using the hand crank, make sure to keep a firm hold. If there is a spring in the switch point when the machine is unlocked, the hand crank may accelerate rapidly in the direction it is being turned, possibly causing injury.

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Inspection and Maintenance of Switches and Derails

General Inspection & Maintenance

Motor Compartment – Wire & Terminals

AAR Terminals and Wiring in Good Condition on an M23



Terminals and Wiring in Good Condition on GRS 5F



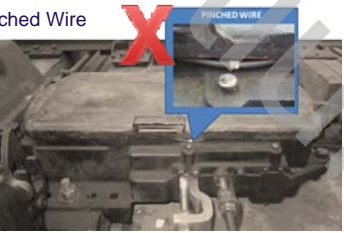
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Inspection and Maintenance of Switches and Derails

General Inspection & Maintenance

Motor Compartment – Wire & Terminals

Pinched Wire



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Inspection and Maintenance of Switches and Derails

General Inspection & Maintenance

Motor Compartment – Commutator & Brushes

- Clean
 - Use lint free cloth
 - Remove carbon dust around commutator end of armature, in undercuts, brush holders and brush sides
 - Dry if solvent is used
- Ensure no pitting or excessive worn/burnt
 - Should be coffee colored & highly polished

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