



Field Care Live Line Hotsticks

Standard
Operating
Procedure

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1.0 Purpose

This SOP provides:

- The approved method for daily and monthly care of live line hotsticks for Workers

2.0 Roles and Prerequisites

Role(s)	Quantity Required	Prerequisites
Qualified Electrical Worker/PLT Apprentices	1 or more	1. Clear understanding of the information contained within this SOP

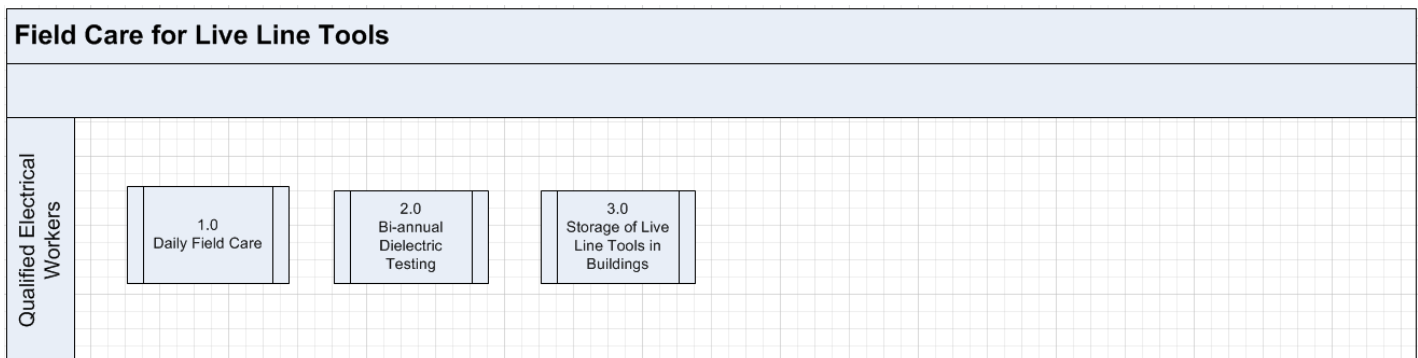
3.0 Tools and Equipment

Minimum Tools and Equipment Required:

- Live Line Hotstick(s)
- Silicone rags and approved cleaning products
- Portable hot stick tester
- Portable tool rack
- Tarps
- Clean rags
- Minor repair kits
- Dedicated leather work gloves for handling the live line hotsticks

4.0 Procedure

High Level Flowchart





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The Procedure

NOTE: The following requirements shall be met prior to the start of the procedure:

- Complete Hazard/Aspect and Risk Assessment
- Applicable Personal Protective Equipment (PPE) is available and in good condition
- Consider Environmental Best Management Practices

IMPORTANT NOTE: WHEN STORING HOTSTICKS IN TRUCKS, THEY MUST BE STORED IN A PROTECTIVE COVER AND PLACED ON RACKS. WHERE RACKS ARE NOT AVAILABLE, THEY MUST BE STORED IN AN INDIVIDUAL PROTECTIVE DEVICE AND EVERY ATTEMPT MUST BE MADE NOT TO STACK THEM MORE THAN 2 HIGH.

NOTE: Appropriate care and maintenance of hotsticks is imperative for the safety of field workers involved in live line work. Hotsticks not properly maintained have been known to flashover due to contamination creating high risk hazards for field workers performing the live line work.

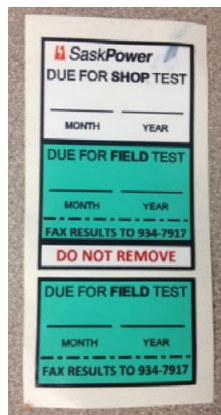
NOTE: All hotsticks which fail inspection **MUST** be removed from service and tagged in a manner in which no personnel could inadvertently use it

1.0 Daily Field Care

1.1 Daily Field Care for hotsticks

1.1.1 All QEWS using hotsticks shall adhere to the following steps:

- *Check for correct hotstick information including TEST DUE date. If hotstick does not have a Test Due sticker and /or a SaskPower serial number, STOP the inspection and send to apparatus tool repair*



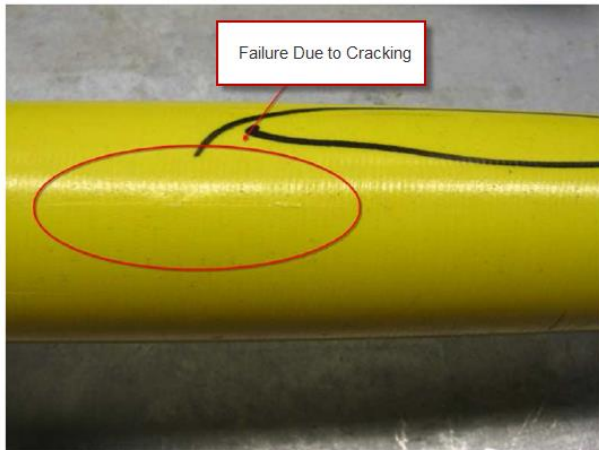
Test Due Date Sticker



SaskPower Serial Number

- *However, if a portable stick tester is available, a qualified operator may perform the test to deem the hotstick useable. Refer to the In Service (Field) Dielectric Hotstick Testing SOP*

- For visual inspection of hotsticks, look for:
 - Cracks in the fiberglass/material (Figure #1 below)
 - Broken fiberglass/material (Figure #2 below)
 - Ensure all coatings are intact, not damaged(Figure #3 below)
 - Electrical damage (burn marks, corona damage)
 - Cleanliness (dust, grease, etc.)



Figure#1 - Cracks in the Fiberglass



Figure#2 - Broken Fiberglass



Figure#3 - Damaged Fiberglass (Deep Rub Marks)

- For mechanical inspection of hotsticks, look for:
 - Lock in buttons (Figures #4 below)
 - Hinges (check if they are loose)
 - Operating mechanisms (check for stiffness)
 - Loose hardware
 - Gripping and binding

- Rub Marks and Contamination (Figure #5 below)



Figure #4 Damaged Button Hole



Figure#5 - Dirt and Contamination on Stick

NOTE: If a hotstick fails any of the inspection criteria listed above (barring cleanliness), abort the rest of the inspection and send to Apparatus Tool Repair with a note explaining the failure. If cleanliness is unsatisfactory, perform the following cleaning steps:

- *Cleaning:*
 - Wipe the hotstick and dry with a clean rag
 - Use clean silicone rag and wipe the hotstick shaft in a circular motion starting from the high voltage end of the hotstick and moving towards the handle while overlapping the wiping areas
 - Repeat by rotating the stick at 90 degree intervals until the entire circumference of the hotstick has been cleaned
- *Record keeping:*
 - After completing the Daily Field Care for the hotstick, the record of the action shall be recorded on the HARA form indicating that all the steps in the Daily Field Care have been performed
- *Maintain a clean hotstick during use and handling:*

- Ensure Live Line hot stick is not laid down, leaned on trucks, does not come in contact with foreign objects, or compromised in any way from its cleaned state. It is recommended to use stick stands and tarps etc. to aid in keeping sticks contamination free
- A hotstick must be maintained in its clean state throughout the work day. If a hotstick has been contaminated or perceived to be contaminated, it must be removed from service immediately and subjected to the cleaning process
- Ensure the clean hotstick is only handled by clean gloves dedicated for the sole purpose of handling the hotsticks
- Gloves used to handle the hotsticks for transmission voltage work are to be specially marked and dedicated for the sole use of live line work and shall be used only during the handling of the cleaned hotstick. Then they are to be stored in a dedicated container/holder
- The hotstick is to be placed on the appropriate bucket hanger(s) to keep the fiberglass insulation clear and free from damage or contamination while being lifted into the work zone

2.0 Bi-annual Dielectric Testing

2.1 Bi-annual Dielectric Testing

2.1.1 Employees shall:

- *Arrange for dielectric testing through their Manager at a minimum of once every two (2) years, and at least three (3) months prior to the expiry of each hotstick*
- *All employees who perform field dielectric testing of hotsticks shall be trained in the use of the approved field test equipment and all required documentation of test data as per the In Service Dielectric Stick Testing SOP*
- *Every 6 years the hotsticks are to be sent to Apparatus Tool Repair for complete Di-Electric Testing*

NOTE: *Transmission hotsticks are only to be re-certified by Apparatus Repair*

3.0 Storage of Live Line Tools in Buildings

3.1 Storing Hotsticks in Buildings

3.1.1 Employees shall:

- *Ensure any damaged or outdated hotsticks are to be tagged as such so that they are not inadvertently used by anyone*
- *It is acceptable to store extra hotsticks with good test date standing against a wall in the appropriate bag or container. Providing they cannot fall over or be damaged in any way*
- *If hotsticks are to be stored on shelves or on racks, they are not to be stacked more than two high*



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5.0 Components

The following is a list of components for this SOP which can be accessed through the SOP System:

Component Name	Component Type	Component Description	Location of Component
Field Care for Live line - Hotstick tools Flowchart	Flowchart	The high level and mid-level flowchart for this procedure	SOP Online - SOP Bundle: Field Care for Live line Hotstick tools SOP
Cleaning Live line tools Video Job Aid	Job Aid	A video job aid for cleaning a hot stick	SOP Online - SOP Bundle: Field Care for Live line Hotstick tools SOP

6.0 Acronyms, Definitions and Symbols

Acronyms and Abbreviations

PPE - Personal Protective Equipment

HARA - Hazard/Aspect and Risk Assessment

FRC - Fire Retardant Clothing

QEW - Qualified Electrical Worker

FRP - Fibreglass Reinforced Plastic (Insulated Stick)

Definitions

Hotstick - Approved electrical insulating protective equipment used for live line work methods to create a safe work zone

7.0 Policies and Regulatory Requirements

This SOP is a result of the following regulations, policies, industry standards, and corporate directives and standards:

Regulatory Requirement(s)

- Occupational Health and Safety Regulations 1996 Section 465 (c)
 - Qualified electrical worker - Occupational Health and Safety Regulation 465 (c)**
 - (i) the holder of a journeyperson's certificate in the electrician trade issued pursuant to The Apprenticeship and Trade Certification Act, 1999, and includes an apprentice in the trade while under the supervision of a journeyperson;*



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(ii) the holder of a journeyperson's certificate in the power lineperson trade issued pursuant to The Apprenticeship and Trade Certification Act, 1999, and includes an apprentice in the trade while under the supervision of a journeyperson; or

(iii) for the purpose of design, calibrating of equipment, inspection, monitoring, testing, and commissioning of equipment in high voltage installations, electrical engineers, applied science technologists or certified technicians who have achieved professional certification within an electrical, electronics, industrial or instrumentation discipline

Policies

- Hazard/Aspect and Risk Assessment Policy
- Personal Protective Equipment Policy

Standards

- Deviation from Safe Work Procedure Standard
- Personal Protective Equipment Standard
- Hazard/Aspect and Risk Assessment Standard

Other

- Safety and Environment Rulebook
- Environmental Best Management Practices

8.0 References

References

Field Inspection and Dielectric Testing of Hotsticks SOP