# A-04

# ELECTRICIAN TRAINING

## SKILL CHECK GUIDE

**Duty A: Power Distribution (above 600V)**
**A-04: Connect Tie Breakers**

Issued 01/01/99

## Rationale

This Skill Development Guide provides the knowledge a Learner needs to connect a tie breaker. The Learner must be able to rack out the main breaker on the de-energized side of a double-ended substation. Then the Learner must open the disconnect to the primary of the transformer on the same side. Finally, the Learner must close the tie breaker to feed both sides from the other, energized, side of the substation.

## Skill Check Set-Up

The main requirement is a double-ended substation for the Learner to connect the tie breaker. You will need to de-energize one side of the substation. Be sure the section to be used in this Skill Check is not powering any essential equipment.

You must make available the tools, materials, and resources needed to demonstrate the task.

## What The Learner Will Need

This section contains the safety information, tools, and resources you will need before connecting the tie breakers.


- ☐ Follow all Caterpillar facility safety standards when performing this task.
- ☐ A key and locking mechanism is built into the main circuit breaker. The same key unlocks the primary side disconnect and locks it open.

- ☐ crank for racking out the main circuit breaker
- ☐ key from the main breaker
- ☐ rod for operating the primary disconnect


- ☐ power system Electrician

## Skill Check

Given a request to restore electrical power to the de-energized side of a double-ended substation, connect the tie breakers.

## Safe Work Practices

| Mastered | Needs Practice | |
|---|---|---|
| _____ | _____ | 1. Follow all Caterpillar facility safety standards when performing this task. |
| _____ | _____ | 2. A key and locking mechanism is built into the main circuit breaker. The same key unlocks the primary side disconnect and locks it open. |

## Task Standards

| | | |
|---|---|---|
| _____ | _____ | 1. The main breaker on the de-energized side must be racked opened. |
| _____ | _____ | 2. The disconnect to the primary transformer on the de-energized side must be opened. |
| _____ | _____ | 3. The tie breaker must be closed. |
| _____ | _____ | 4. All required safe practices must be demonstrated. |

## Evaluator's Sign-Off

The Learner has demonstrated safe work practices and competent performance of the task.

Evaluator: Date:

Learner: Clock No: