The Isolation Switch
Disconnect/Reconnect Instructions - SSD

This procedure is to be used where a Dairyland Isolation Switch, model SW-50-SSD, has been previously assembled to a Dairyland model SSD decoupler. The purpose of the Isolation Switch is to aid in safely connecting and disconnecting the SSD to the pipeline for the purpose of testing the SSD or performing various pipeline tests where the SSD must be disconnected. This procedure advises the steps associated with opening and closing the Isolation Switch in the proper sequence, and to alert the user of safety aspects associated with such operation. Follow all cautions and instructions. Refer to Dairyland installation instructions if needed.

Procedure for Disconnecting SSD

1) To begin the disconnection process, first move the toggle switch DOWN to its CLOSED position. This provides an alternate connection between the decoupler and the cathodically protected structure. The toggle switch is now in parallel with the moveable link.

2) Using a ½” gear wrench or box end wrench, loosen, but do not remove, the 5/16” hex bolts on each end of the movable link. Use the wrench to pivot the link against the link stop as illustrated in the following photo. No arcing will occur because the current has a parallel current path through the closed toggle switch.

Whenever the decoupler is connected to the pipeline (or other cathodically protected structure) the toggle switch should be UP in its OPEN position and the link UP in its CLOSED position with both link bolts torqued 10–12 ft-lbs (13.5-16 Nm). Do not over-tighten.

CAUTION:
When all decouplers on a pipeline that has an AC mitigation system have been disconnected, the pipeline voltage, which also exists on the bare metal switch parts, may be above a safe and acceptable touch potential. Therefore, as a precaution, use electrically insulated gloves or an insulated wrench whenever operating the Isolation Switch. When all decouplers have been reconnected, the pipeline voltage should return to its fully mitigated level.
3) To complete the disconnection process, move the toggle switch UP to its OPEN position. The decoupler is now disconnected (isolated) from the system to which it was connected. Any arcing will be contained within the enclosed toggle switch.

3) Last, move the toggle switch UP to its OPEN position. The decoupler is now reconnected to the cathodically protected structure. Always leave the toggle switch UP in its OPEN position when the decoupler is connected, as only the moveable link is rated for AC fault or lightning current.

Procedure for Reconnecting a SSD Decoupler

CAUTION:
When all decouplers on a pipeline that has an AC mitigation system have been disconnected, the pipeline voltage, which also exists on the bare metal switch parts, may be above a safe and acceptable touch potential. Use a multi-meter to measure the voltage present across the decoupler terminals. Therefore, as a precaution, use electrically insulated gloves or an insulated wrench whenever operating the Isolation Switch. When all decouplers have been reconnected, the pipeline voltage should return to its fully mitigated level.

Use the following procedures for reconnecting the SSD.

1) To reconnect the decoupler, first move the toggle switch DOWN to its CLOSED position as illustrated below.

2) Using a ½” gear wrench or box end wrench, move the link to its closed position. Torque both link bolts 10–12 ft-lbs (13.5-16 Nm). Do not over-tighten.