



## HTT-1 Switch Position Actions

Scope: The HTT-1 is a functional test device which verifies proper operation of a hipot tester's three main circuits; ground continuity, leakage from primary to ground, and arcing from primary to ground. Shown below are expected impedances for each switch position.

### HTT-1 Simulating a Passing Product

In this scenario, the HTT-1 simulates a product with good ground continuity and proper isolation of primary current carrying parts from ground. To simulate a passing product, the HTT-1 front panel switches are set pointing to the GREEN arrows:



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For the “ALL GREEN” switch position, the continuity between the RETURN lead of the HTT-1 and the grounding pin of the cordset of the HTT-1 should be 0 ohms.



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For the “ALL GREEN” switch position, the neutral pin of the cordset and the return lead are open:



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## HTT-1 Simulating a product with an Open Ground

The HTT-1 simulates a product having no connection between the grounding pin of the power supply cord and exposed dead metal. The HTT-1 front panel switches are arranged as shown:



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For the HTT-1 simulation of the “Open Ground” product, the grounding pin of the power supply cord and the return lead are OPEN:



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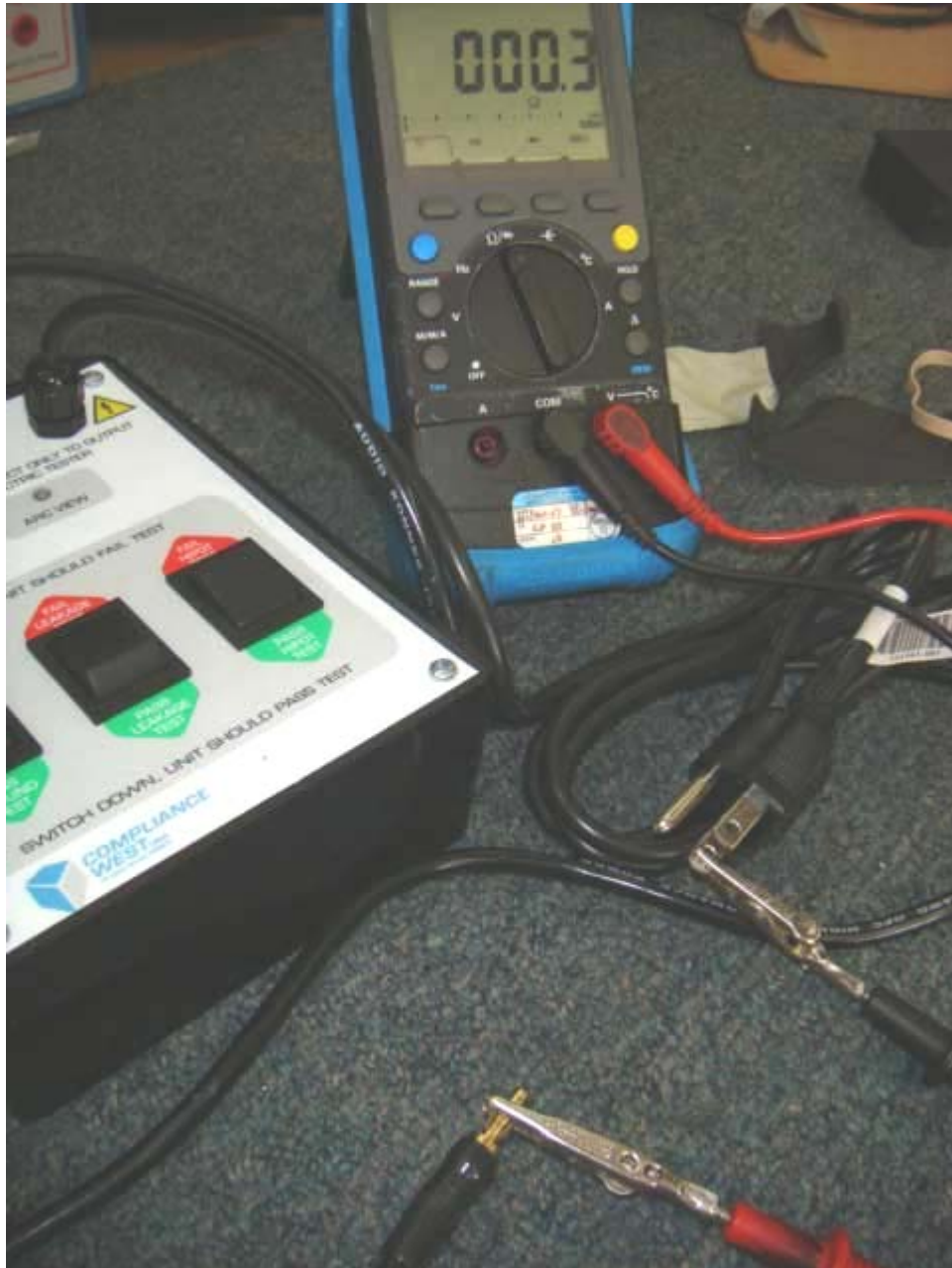
## HTT-1 Simulating a product with High Leakage Current from Mains conductors to Ground

In order to perform the functional check for a high leakage condition, the HTT-1 shorts primary live parts to the RETURN lead. For this simulation, the HTT-1 front panel switches are arranged as shown:





For the HTT-1 simulation of a High Leakage Condition, the RETURN lead is shorted to the neutral pin of the cordset of the HTT-1:



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### HTT-1 Simulation of an Arccover to ground

In this scenario, the HTT-1 simulates a miswired or improperly assembled product which has a small gap between primary parts and ground. For this simulation, the HTT-1 front panel switches are arranged as shown:







In the case of simulating insufficient spacing from primary parts to ground, a continuity test will show the same readings as when the HTT-1 is simulating a correctly assembled product. In this case, there is a spark gap presented inside the HTT-1 between the neutral pin of the cordset and the RETURN lead. This gap is designed to flash over at between 500 and 900 volts. When operating properly, the hipot tester will indicate a failure and the small spark generated can be viewed through the ARC VIEW window on the front of the HTT-1.



NOTE: Not all hipot testers are equipped with an arc detection feature. If the hipot tester being functionally tested does not feature arc detection, do not conduct this test.

NOTE: If the FAIL HIPOT TEST switch setting does not register as a failure, and your hipot tester has an arc detection feature, carefully check the ARC VIEW window to ensure that a spark was generated. If no spark can be seen, the HTT-1 may need service. Contact the manufacturer for instructions.

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